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ABSTRACT

Higher education in general and the Ohio state system of higher education in particular is facing ever increasing demands for services, inflated costs of resources, leveling off of enrollments and income, and increasing competition from other services for public support. As a result of this need and the desire to improve planning for its own sake, universities in Ohio are intensifying their planning processes and attempting to improve internal management. This planning manual was developed and written primarily by representatives of those schools. This manual should enable an institution that is in the early stages of planning to improve its planning process rapidly, and those in advanced stages to make refinements as needed. Although this manual was written for universities in Ohio, its principles should be of equal importance and application to other public and private colleges and universities throughout the U.S. This document includes sections covering an introduction to planning, planning as a cyclical and continuous process, organization of the planning function, prerequisites for successful planning, and products of the planning process. Appendixes include guidelines for developing goals, the University of Georgia program structure, the Ohio state university program structure, and the WICHE program structure. (Author/PG)

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PLANNING

Universities

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HE 005 904

Management Improvement Program
Ohio Board of Regents

MIP

Prepared by a task force of university representatives with direction and staff assistance provided by the Ohio Board of Regents

July 1, 1973

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This book represents one of five manuals prepared under the direction of the Ohio Board of Regents' Management Improvement Program which the Management Division has arranged to distribute. We feel that the recommendations and procedures contained in these manuals are of enough general interest and applicability to warrant sending them to persons outside the Ohio public universities.

The Management Improvement Program was established by the Ohio State Legislature in December 1971 to consider means of improving the management of the state-supported universities and junior colleges. Gerald L. Shawhan was the Director of the Program.

In addition to the five manuals which the Management Division is distributing, five others on the same subjects have been prepared covering the public two-year colleges.

Foreword

This manual is one of ten completed in the Management Improvement Program (MIP) during the 1971-73 biennium. In this project, Ohio's 34 public universities and colleges, in an effort directed and staffed by the Ohio Board of Regents, have developed manuals of management practices concerning institutional planning, program budgeting, personnel management, computer services, and schedule building and registration. The project is unique in at least two ways — the improvement of internal management processes is the objective of the program, and the method of undertaking it was mandated by the Ohio General Assembly to be participatory.

House Bill 475, the appropriation act passed by the 109th General Assembly in December, 1971, created the MIP, directing that it be conducted by and within the system of state-assisted universities and colleges under the direction of the Ohio Board of Regents. This legislative action culminated more than four years of active interest by the legislators in improving the management practices of these schools.

In 1967, a joint House-Senate committee, called the Education Review Committee, was created by the General Assembly. Included in its charge was that of monitoring the management practices of the public universities in Ohio. This committee, in conjunction with the Department of Finance, hired a management consulting firm to perform a management study of the non-academic areas of the 12 public universities and of the state system as a whole. The report of the consultants, published in December, 1969, made about 100 specific recommendations for management improvement. The Education Review Committee remained interested in appropriate follow-up of the study. With the aid of another individual consultant, language was introduced in the General Assembly which was included in the appropriation for the biennium. Some excerpts of the actual language are as follows:

> "The purpose — shall be to design, test, and install, in each such institution, the most efficient feasible internal organization, planning process, financial management, budget preparation and management, auxiliary services management, space management and plant operation, purchasing procedures and inventory control procedures, student data systems including admission procedures and student registration procedures, management reporting systems, data processing, personnel management, and library management.
>
> Each project is to be conducted in cooperation with a committee of representatives from state assisted colleges and universities.
>
> The director of each project is to be a staff specialist in the employ of the Board of Regents.

FOREWORD

For guidance in the conduct of each Management Improvement Project, the participants are to consult the findings as set forth in the 1969 Consultant's Report."

Primarily because the appropriation to carry out the program was not commensurate with the depth and breadth of the tasks spelled out in House Bill 475, the scope of the Management Improvement Program in this biennium was restricted to five central areas (Institutional Planning, Program budgeting, Computer Services, Schedule Building and Registration, and Personnel Management). In addition, the original mandate of H.B. 475 was "to design, test and install the most efficient, feasible procedures" in each of the areas in each of the institutions. Because of the limited time, only 18 months, and the participatory method of undertaking the project prescribed in the bill, the immediate objective set forth in the past biennium was the generation of a manual of best practices in each of the five areas.

As stipulated by the legislature, task forces of institutional representatives were appointed and actively participated in the process. Ten such groups were formed — five for the universities and five for the community and technical colleges. Each task force consisted of representatives qualified in the particular subject matter under study. Each group had at least one member from every school. In total, more than 175 college and university personnel from all over the state were directly involved, as well as many others at each institution through formal and informal contact with the appointed members. Each task force met 8-10 times in the year and a half devoted to the project.

As specified in the legislative bill, the Ohio Board of Regents provided direction and staff for the project. Four professional management analysts, two secretaries, and limited part-time analytical and clerical help constituted the manpower to fulfill that charge.

Three major phases constituted the project:

1. **Inventory the current practices.**
   This phase involved compiling the existing practices and procedures in the five areas at each state-assisted school in Ohio. Approximately five months were devoted to this task.
2. **Determine the issues to be addressed in the manuals.**
   Three months were devoted to discussions about the specific issues to be covered.
3. **Write manuals.**
   Nine months were devoted to writing the manuals. This phase included extensive and detailed discussions by the task forces, much drafting and redrafting by the staff and task force members, and finally concurrence with the manual contents.

The Manuals are practical, informative and useful. For the most part, all of the manuals contain general guidelines, principles and broad recommendations for good management within the universities and colleges, rather than detailed and specific procedures. They also include recommendations which call for direct action by the Board of Regents. Basically, the recommendations seek more effective internal management and accountability, while recognizing the autonomy of each school.

Literally hundreds of people have been involved in this project. All members of the Ohio Board of Regents staff, especially former Chancellor John Millett, and Vice Chancellor William Coulter, have made significant contributions to the entire project. The Regents were particularly fortunate in gathering together the staff for the MIP. Dr. Ronald Lykins, Mr. Lawrence O'Brien, Mr. Douglas Smith, and Dr. Joseph Tucker brought with them considerable experience and knowledge from administrative and academic aspects of colleges and universities, as well as from private industry. Their perseverance and leadership in directing and staffing the task forces were superb. Special thanks must be given to Mrs. Betty Dials, the secretary for the program, who was an inspiration to all.

Many agencies in other states, including colleges, universities and state systems, were contacted and in some cases contributed helpful data to the program. Applicable professional organizations were also contacted and did help.

But more than any other, however, the contributions made by the individual task force members must be mentioned and expanded upon. The more than 175 personnel from the 34 colleges and universities who were the official representatives for their schools contributed long hours, data, ideas, constructive criticisms, changes, and encouragement. They not only worked collectively in the task forces, but also were required to spend considerable time on the respective campuses gathering data together and communicating with many campus constituencies to make sure that their schools were fairly and adequately represented.

The University Planning Task Force members were:

David S. Atwater, Director of Institutional Research
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FOREWORD

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Ronald G. Lykins, Associate Director of Management Services
Ohio Board of Regents (Task Force Director)

Without their sincere participation, this manual would not exist.

Gerald L. Shawhan, Director
Management Improvement Program

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Preface

The need and desire for effective planning has never been greater. Higher education in general and the state system of higher education in Ohio in particular are facing ever increasing demands for services, inflated costs of resources, leveling off of enrollments and income, and increasing competition from other services for public support. Never has the need for more effective use of limited resources been so evident. As a result of this need and the desire to improve planning for its own sake, universities in Ohio are intensifying their planning processes and attempting to improve internal management.

This planning manual was developed and written primarily by representatives of those schools with seven purposes in mind.

First: To provide educational administrators with an organized and logical discussion of the planning process and its major product, plans.

Second: To provide a means of sharing experiences with effective planning practices developed at other schools.

Third: To provide practical and useful ideas which could be used to improve planning practices at individual institutions.

Fourth: To provide a means of evaluating planning processes.

Fifth: To identify and describe specific plans which are recommended for institutions of higher education.

Sixth: To provide a glossary of planning terms as used by educational institutions in Ohio, and

Seventh: To provide a bibliography of planning literature.

This manual recognizes there is a wide spectrum of planning practices in colleges and universities today. In particular, state universities in Ohio are at different stages in their utilization of formal planning practices. In order to meet a diversity of needs, this planning manual should provide the reader with a clear perception of a good planning process; the method for organizing the planning function; the prerequisites for successful planning; and the plans which are to be expected from an institutional planning process. This manual should enable an institution that is in the early stages of planning to improve its planning process rapidly, and those in advanced stages to make refinements as needed. Although this manual was written for universities in Ohio, its principles should be of equal importance and application to other public and private colleges and universities throughout the United States.

It should be emphasized that an effective planning process requires a commitment of space, money, people and time. It requires a commitment of the Ohio Board of Regents and the Legislature to work with individual institutions to improve the planning process and to help provide the necessary financial support. However, most of all, successful planning requires a commitment of university presidents and top level administrators.

PREFACE

The development of the Management Improvement Program Planning Mutual has been characterized by a spirit of cooperation and a commitment of all the universities to improve the planning process. Credit for this project must be given to all the university Task Force representatives who devoted their time and energy to make the manual a reality. The Management Improvement Program is a tangible example of how working together to improve the internal management of institutions can be accomplished effectively without destroying the autonomy of individual schools.

Ronald G. Lykins, Director
University Planning Task Force

PLANNING

Universities

1. Introduction

PLANNING IN THE EDUCATIONAL ENVIRONMENT

Need for Emphasis on Planning

Planning is one of the most important functions of the management process. Most educational administrators recognize the need to chart the future course of their institutions and to determine how their goals will be achieved. Many schools have planning departments which are responsible for planning the physical development of the campus. At times all institutions plan new degree programs and plan increases in staffing, and all schools plan a budget.

Although the planning function has long been an everyday part of institutional management, little attention has been given to the "planning process" as a major element of institutional management until the past few years. Three major external forces have brought about a major concern with planning.

First, major strides have been made by cooperate, defense, and urban planning agencies in developing tools, technology and approaches to the management process: Operations Research (OR), Planning Programming Budgeting Systems (PPBS), Management Information Systems (MIS), and Systems Analysis, all coupled with improved computer support, represent major examples.

Second, there has been a growing involvement of students, parents, legislators and taxpayers in matters that were formerly considered to be institutional, and there has been a corresponding demand from these external and internal voices for the university to account for its activities and its expenditures.

Finally — and perhaps as a partial result of the other two universities are being forced to compete to a greater extent with other societal organizations for a share of the tax dollar and the privately contributed dollar. At the same time that support is becoming harder to obtain, as operational and expansion costs continue to rise.

State Agency Coordination

It is vital that this planning manual demonstrate conclusively to the institutions of higher education, the members of the Ohio Board of Regents, members of the Ohio Legislature, and the executive branch of state government, that they have an interest in, and indeed, an obligation to cooperative efforts that will encourage long-range efficiency and growth in meeting the statewide objectives of higher education. Public institutions of higher education, by virtue of their increasing number, have gained a larger impact upon

the administration of state government. The budget for public higher education is a significant part of the entire state bduget. When considerable shifts occur with the Legislature in financial and philosophical support for higher education programs, prior planning carried on by the institutions of higher education may quickly become obsolete. Therefore, planning in higher education must consider the philosophy, objectives and support available from state government. Although the planning function has long been an everyday part of institutional management, little attention has been given to the planning process as a major element of institutional management until the past few years. Three major external forces have brought about a major concern with planning.

The Legislature, the Ohio Board of Regents and the state educational institutions have made much progress in cooperative planning through legislative budget hearings with presidents, the Management Improvement Program and other means. It is desirable that this type of cooperative planning and working together is continued.

Definition and Role of Planning

In this manual, planning is defined as that part of the management process which attempts to predetermine a best course of action. The planning process is characterized by a systematic consideration of goals and objectives, identification of programs, calculation and allocation of resources, identification of priorities and alternatives, and program evaluation.

Planning is a cyclical and continuous process that results in plans. A plan is a document which outlines a complete program of action to follow in attaining goals and objectives. It is important to distinguish between plans and the planning process. The planning process results in a plan. It is possible, but not desirable, to have a document which has the appearance of a plan without reflecting the planning process. That is, a document might be prepared which one believes to be a plan without considering goals and objectives, priorities and alternatives, evaluation, etc. To be of most value, a plan should exhibit all the previously mentioned characteristics of the planning process. It is important to note that the planning process does not stop with the first draft. Plans must be redrafted, evaluated and revised to meet changing conditions and needs.

Purpose of Planning

The chief purpose of planning is to assure that goals and objectives are identified consistent with institutional mission and that programs are developed to achieve institutional goals and objectives. Another major purpose of planning is to assure that systematic and rational consideration has been given; and will be given to the use of resources. In state-assisted institutions of higher education in Ohio, this assurance is necessary for student and faculty, educational administrators, Boards of Trustees, Board of Regents, Governor's Office, Federal agencies and bodies, and the ultimate authority — taxpayers.

Comprehensive Planning

The planning process must be comprehensive, and embrace all structural and functional elements of the educational system. Thus, planning may recognize the separateness or speciality of colleges or other units, but at the same time must view them as subsystems or component parts of the whole

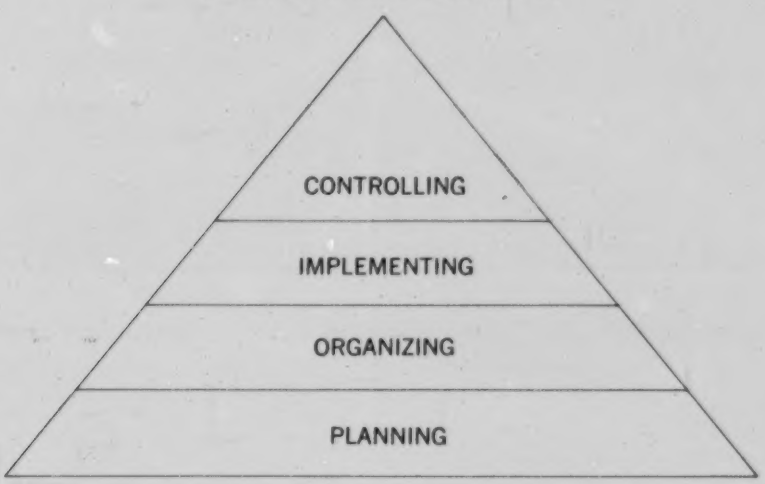
university. Planning must be integrated with the larger world. Departmental planning must be integrated with college planning; instructional support planning with instructional planning; and the institutional planning with the total state higher educational planning. Planning must reflect a multi-ranged view; it must present a long-, medium-, and short-range perspective. Planning must be an integral part of educational management. At all levels, but especially at the top, there must be a conscious, purposeful, commitment to planning. Finally, planning must be concerned with the qualitative as well as the quantitative aspects of development, with the academic program, the physical program and the financial implications.

Planning and Management

INTRODUCTION TO THE PLANNING PROCESS

Planning is one of the most important functions of the management process. Planning and the other functions are described in Figure 1.

Figure 1
FUNCTIONS OF MANAGEMENT



Management can be defined as the art and science of working with and through people to achieve organizational goals and objectives. Planning is defined as pre-determining a future course of action. When plans are developed, thought must be given to how the functions of organizing, implementing and controlling will occur.

Collectively, these four functions make up the concept of management. In this manual, when we refer to the subject of planning for organizing and implementation, we shall use the term program management. When we address ourselves to planning for control, we shall use the term program evaluation.

Comprehensive planning considers all of the activities dealing with the operation of an educational institution. From the managerial viewpoint, planning is inclusive; it should not be thought of as an isolated process. Planning is accomplished to manage an institutional effectively.

INTRODUCTION

Planning establishes the groundwork and background for the organizing, implementing and controlling efforts. The plans of an organization certainly influence the organizational structure that is developed and used. To be useful, a plan must be implemented, and control is needed to make sure that the plans are being realized as intended. Planning is the foundation of management, but it cannot stand alone. The vital supporting areas of organizing, implementing and controlling give meaning to the planning process and to the overall concept of management.

Organizational planning includes the identification and grouping of activities necessary for the attainment of goals and objectives, the assignment to individuals of responsibilities for the conduct of these activities, and the definition of the relative authority delegated to each individual charged with the performance of each activity.

The development and maintenance of organization charts is an essential function of organizational planning.

An important purpose of organizational planning is to determine whether all essential functions have been identified and whether responsibility for the discharge of each function has been explicitly assigned. Another purpose is to recognize changes in circumstances which call for modification and updating of the organizational structure. Constructive organizational changes will be required to improve productivity, induce efficiency, enhance morale and implement institutional plans.

Organizational planning includes making it possible for all managers to perform planning. In other words, planning must be planned. The organizational environment required for planning must be provided by the structure.

Good organizing requires planning. Too frequently in institutions of higher education an organizational structure is permitted to expand or contract without an over-all plan. Changes take place on the basis of expediency, with little regard for design and proper balance. **Thus, it is recommended that the president of each university submit an organizational plan to the board of trustees and university community, on a regular basis. Furthermore, it is recommended that the organization plan be simultaneously submitted with the financial plan. Provision should be made in the organizational plan for a systematic review and update.** (Miami University has done some excellent work in developing and updating the organizational plan.)

The work of plannng and organizing is insufficient to get things accomplished. The plans and the organization must be implemented or carried out. Implementation planning means deliberate effort to put the plan into action. No tangible output is achieved until the implementation function is performed.

In most instances implementation of a plan involves making available the resources which will be consumed by activities. Accordingly, planning for the implementation of planned activities involves calculation of the resources required to conduct these activities and determination of steps to make these resources available. Implementation planning must also be concerned with assigning a specific responsibility for initiating the steps required to make the activities operational.

Good management, of course, requires the implementation of activities which will effectively achieve intended goals and objectives. The heart of plan-

ning is the study of the utility and efficiency of alternative sets of activities (programs) as means to accomplish recognized ends. Once planning has identified those possible activities which are optimal as means to accomplish institutional goals and objectives, implementation of planning will give actual existence to these possible activities and make them instruments for achieving the intended results. The important link in this sequence, of course, is the continuity of planning with implementation.

It is recommended that all plans at each university include a calculation of the resources required for the implementation of the plan, a procedure for procuring these resources and making them available for the conduct of the activities, assignment of responsibility for initiation of the activities, and a time schedule for implementation.

Planning for Control

Planning for control is concerned with evaluating performance and output from the point of view of intent, and with directing activities to maximize achievement of goals and objectives. Effective control must be planned through careful consideration of goals and objectives and explicit definition of standards of evaluation.

Controlling involves determining that which is intended to be accomplished, measuring what is being accomplished, comparing the intention and the performance, and then applying corrective measures to ensure performance takes place in accordance with established planning.

Controlling is the natural consequence of the other functions of management. Good planning makes systematic provision for performing the control function. Likewise, organizing and implementing efforts should take into account considerations relating to feasible control. Distinct provision for control and evaluation must be incorporated in all planning. **Thus it is recommended that each plan in a university promulgate a set of appropriate standards for evaluating program effectiveness and a mechanism for securing the control of programs as a means for achieving intended goals and objectives.**

Steps in the Planning Process

Planning is a cyclical and continuous process which calls for every organizational unit in an educational institution to systematically consider:

1. Setting goals and objectives
2. Identifying programs
3. Calculating resource requirements of programs
4. Comparing resource requirements to available resources
5. Allocating resources to programs
6. Planning for organizing and implementing programs
7. Planning a system for evaluation (Control)

The ingredients of the planning process are not mutually independent. Thus, it is important for educational administrators to consider the total planning process as being integral to management decisions in all existing and conceived programs. Indeed, the planning process should permeate every organizational unit in the institution. See Figure 2 for a graphic illustration of the planning process.

Plans-Products of the Planning Process

The primary product of the planning process is a plan (see Figure 3), a document which outlines a complete program of action to follow in attaining goals and objectives. As such, a plan should reflect the planning process from which it was developed. Although, the specific content of a plan will depend on numerous factors — i.e., type, level, scope, range, etc. — it should include: goals and objectives, priorities and constraints, programs, inputs and outputs, resources, time frames, inter-relationships with other plans, and means of evaluation.

Figure 2

ELEMENTS OF THE PLANNING PROCESS

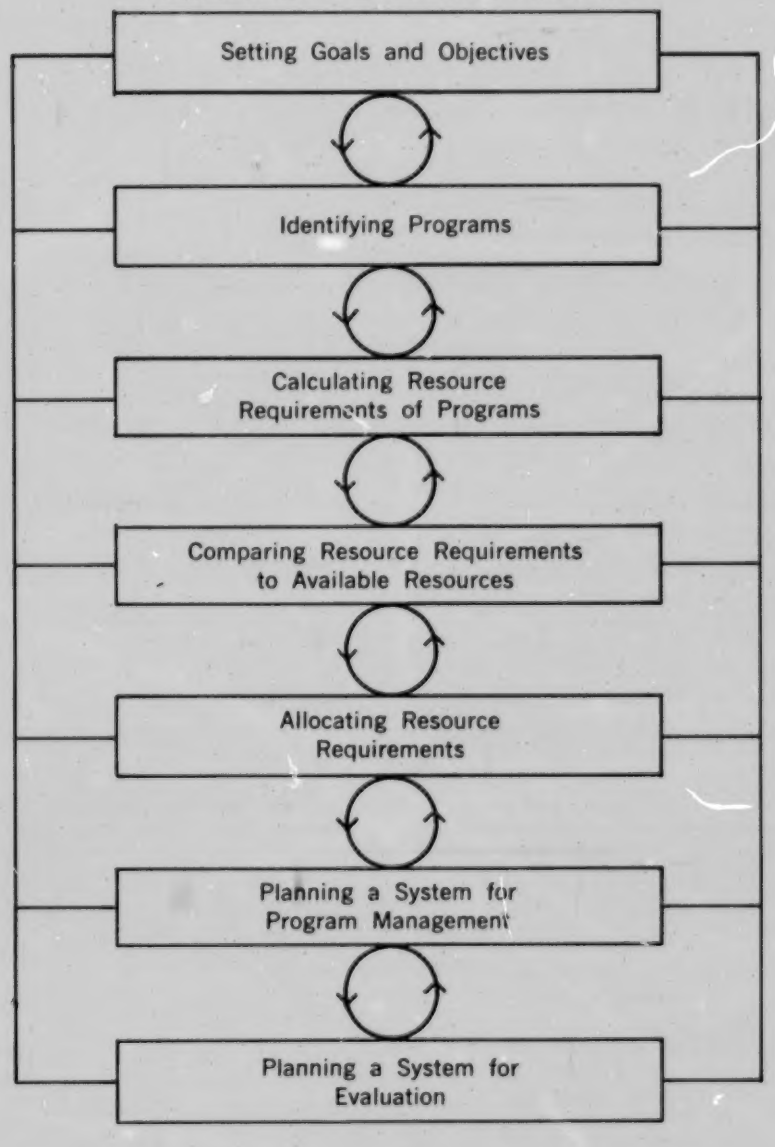

Setting Goals and Objectives
Identifying Programs
Calculating Resource Requirements of Programs
Comparing Resource Requirements to Available Resources
Allocating Resource Requirements
Planning a System for Program Management
Planning a System for Evaluation

Figure 3

SHORT, INTERMEDIATE, AND LONG RANGE PLANS — PRODUCTS OF THE PLANNING PROCESS

I. Ohio Board of Regents Master Plan

II. The Comprehensive-Institutional Plan

A. Foundation Plan
1. Institutional Role and Mission Statement
2. Instructional Goals and Objectives
3. Institution-wide Enrollment Projection by Type and Level of Student
4. Faculty and Staff Needs Projections by Personnel Category
5. Management Information System
6. Organization Plan

B. Educational Plan
1. Academic and Related
a. Departmental Instruction Including Instructional Services
b. Research
(1) Departmental
(2) Sponsored
c. Public Service (Including continuing education)
d. Library Services
2. Supporting Services
a. Student Financial Aids
b. Auxiliary Services
c. Student Services
d. General Administration

C. Physical Development Plan
1. Development Concepts
2. Planning Parameters
3. Land Use
4. Buildings
5. Development Capital

D. Financial Plan
1. Operating Budget Component (income and expenditures)
2. Capital Budget Component (income and expenditures)

III. Inter-Institutional Plan

A. Among State-assisted Institutions
B. Consortia

Although complete adherence to this planning manual is not anticipated, it is expected that all institutions will be able to demonstrate that an effective planning process does exist by being able to document its planning process in relation to this manual.

As minimum evidence of planning, every educational institution in Ohio should have on file with the Ohio Board of Regents a Comprehensive Institutional Plan. Furthermore, there should be some evidence that this plan is used as a management guide and that it is up-dated on a continuous basis. Specifically, in order to provide some evidence that the educational institution

is effectively planning and utilizing available resources, the institution should be able:

1. **To demonstrate that a systematic planning process does exist throughout the institution.**
2. **To promulgate the results of institutional planning in a comprehensive series of planning documents that will establish specific direction for the institution.**
3. **To identify personnel who are responsible for the development, implementation, and evaluation of plans and the planning process.**
4. **To show that it has the resources needed for systematic planning and for making management decisions on a rational basis.**
5. **To identify measurable results of the planning process.**

The Ohio General Assembly, the OBR, and the state educational institutions have made such progress in cooperative planning through legislative budget hearings with presidents, the MIP and other means. **It is recommended that this type of cooperative planning and working together is continued. Specifically, it is recommended that a special task force convene to study and recommend specific means of by which cooperative planning can be enhanced for the mutual benefit of all.**

2. Planning as a Cyclical and Continuous Process

SETTING GOALS AND OBJECTIVES

Role of Goals and Objectives in the Planning Process

A weak link in the planning process has often been the failure to identify and agree upon goals and objectives. The establishment of goals and objectives is difficult for several reasons:

1. It is vital for goals and objectives to be clearly defined.
2. There has been uncertainty as regards the meaning of goals and objectives. The two terms are often vague, and used interchangeably in the literature.
3. The methodology for defining and agreeing on goals and objectives is not well developed.
4. Faculty members and educational administrators are often not acquainted with the concepts of goals and objectives.
5. Administrators on one level often point out that the next higher administrative level does not have satisfactory goals and objectives.
6. The stringent criteria requirements of goals and objectives makes the process a formidable task.

Goals and objectives of planning units are important for several reasons. Goals and objectives:

1. Are the necessary first steps in establishing the direction in which an organizational unit should proceed.
2. Tend to require a rational study and approach by those responsible for managing an organizational unit.
3. Provide a means of selecting priority and alternative programs on a basis other than dollars and cents.
4. Provide a means of evaluation.
5. Provide targets to which all parties can relate.

Goals and objectives are the foundation of the planning process, and it is vital for goals and objectives to be clearly distinguished. Goals are defined as the desired end results set for long periods of time (e.g., ten years). Goals and objectives are often used interchangeably, however, they differ with regard to time frame, measurability and sequence. Goals are long-range in scope and regarded as the end result. Objectives are short-range and are steps in the direction of attaining a goal. Objectives are designated as the measurable at-

tainments or desired results set for programs over a short period of time (e.g., one year). Objectives are generally regarded as progressive steps toward a goal. Thus, a series of objectives should lead to one's goal. Goals must be established before objectives are specified.

Requirements of Goals

The requirements of a goal indicate it should:

1. Be in agreement with the institution's philosophy.
2. Be compatible with the mission of the institution.
3. Be divisible into objectives.
4. Be feasible.
5. Select predictable consequences.
6. Have a long-term time frame for completion.

Requirements of Objectives

The requirements indicate an objective:

1. Must relate to a goal.
2. Must be measurable or observable.
3. Must identify the specific group to which the objective applies, i.e., the target group.
4. Must specify the method of measurement.
5. Must specify the criteria for evaluation.
6. Must state the conditions under which measurement of the achievement of the objective is to be accomplished.
7. Must state the time period for achievement.

Written Goals and Objectives

To be a useful management tool, goals and objectives must be specified in writing.

Guidelines for Developing Goals and Objectives

Practical guidance for setting educational goals and objectives has been provided in several recent publications.[1] Planning of institutional goals and objectives must not only satisfy the requirements for goals and objectives that have already been suggested, but must also secure group understanding and endorsement of the formulations which are developed. Appendix 1 contains a specific technique to follow in setting goals and objectives. This appendix should be of interest and value to those administrators who are desirous of some clear-cut guidance in establishing goals and objectives for an organizational unit.

Planning for setting of institutional goals and objectives must address questions such as the following:

1. What is the distinctive mission of the institution the reason it exists?
2. What are the things the institution wants to do or to see happen?
3. What will count as evidence for or against the claim that the goal or objective has been reached?
4. How will an individual outside the institution be able to determine whether the institution is attaining its goals or objectives?

[1] Robert F. Mager, **Goal Analysis**, Belmont, Calif., Fearon Publishers, 1972. **Preparing Instructional Objectives**, Belmont, Calif., Fearon Publishers, 1962; H. C. Ammermann and W. H. Melching, **The Derivation Analysis and Classification of Instructional Objectives**, George Washington University, May, 1966; Edward Gross and Paul V. Grambsch, **University Goals and Academic Power**, Washington, The American Council on Education, 1968; Benjamin S. Bloom, ed., **Taxonomy of Educational Objectives: The Classification of Educational Goals**, New York, David McKay Company, Inc., **Handbook I: The Cognovit Domain**, 1956, **Handbook II: Affective Domain**, 1964.

5. What is the relative importance and priority of the various goals and objectives of the institution?

Responsibility For Formulating Goals and Objectives

There are several means of establishing a working set of goals. They are:

1. Appoint a working committee composed of students, faculty, administrators and other related groups.
2. Assign specific responsibility of goal seting to chief officers of the institution, e.g., vice president for academic affairs, vice president or director for planning, vice president for finance, etc.
3. Assign specific responsibility to a chief officer and appointing an advisory committee to assist.
4. Board of Trustees accept the responsibility with the proper staff assistance.
5. Presidents assume the responsibility of goal setting.

Depending on the size of the university and particular circumstances, any of the foregoing methods might be effective. For many universities, it appears that method No. 3 appears to be most appropriate. This method should provide effective and efficient leadership while permitting student and faculty participation.

Classification of Institutional Goals and Objectives

Planning of goals and objectives must be comprehensive, in the sense that planning leads to specification of all the kinds of goals and objectives which are appropriate to the institution. A taxonomy of goals and objectives for an educational institution will help departmental, collegial and university planners to consider a wide range of actual or possible goals and objectives and to achieve a high degree of comprehensiveness in planning.

The taxonomy of institutional goals and objectives should include not only those which relate to the primary mission of the institution (e.g., instruction, research and public service), but also those which facilitate and support the primary goals and objectives. Specific planning for support services (e.g., plant operation and maintenance or general administration) is essential to the achievement of the primary goals and objectives of the institutions. Support goals and objectives are secondary to primary goals and objectives in the way that means are secondary to ends, but they are no less indispensable. Planning must therefore provide for specification of support goals and objectives as well as primary goals and objectives.

An important function of a taxonomy is to aid in establishing priorities among institutional goals and objectives. The taxonomy will identify certain goals and objectives as "primary", others as "supportive", and it may suggest other relationships among goals and objectives which will aid in determining their relative importance in terms of the institution's essential mission and nature.

A suggested outline of university goals and objectives is offered in Figure 4. The outline is intended to be illustrative and suggestive. The point to be emphasized is that planning for setting of institutional goals and objectives must be of the most comprehensive sort, and must specify goals and objectives for both primary and support programs of the university.

The basis for the taxonomy of Figure 4 is a concept of the major kinds

of functions that are required for the operation of the university as a system (auxiliary enterprise functions have not been included in this illustration). The taxonomy is one of types of functions of the university, not one of the types of operating units or programs in the organization. It is to be expected, of course, that particular operating units will display specialized emphasis in pursuit of a limited set of goals and objectives. On the other hand, concern

Figure 4

TAXONOMY OF UNIVERSITY GOALS AND OBJECTIVES

I. PRIMARY GOALS AND OBJECTIVES

- A. Instruction
  1. Development of understanding, skills and attitudes
  2. Preparation for particular tasks and functions in society
  3. Transmission of knowledge and culture
- B. Research and Creative Activity
  1. Discovery, preservation and dissemination of knowledge
  2. Artistic creation and performance
- C. Public Service
  1. Contributions to general culture and entertainment
  2. Consultative service

II. SUPPORT GOALS AND OBJECTIVES

- A. Staff Support
  1. Staff recruitment and personnel services
  2. In-service training of staff
- B. Student Service
  1. Student recruitment
  2. Student advising and counseling
  3. Student financial aid
  4. Student activities
- C. Physical Facilities
  1. Provision of space and equipment
  2. Maintenance of buildings and grounds
- D. Management
  1. Policy formation and revision
  2. Planning
  3. Fiscal and policy control
- E. Communications
  1. Records maintenance
  2. Duplication and publication services
  3. Information system maintenance
  4. Public information, public relations, and advertising
- F. External Support
  1. Procurement of funds for unrestricted purposes
  2. Procurement of funds for restricted purposes

for many of the above goals and objectives may be shared by a wide range of activities and operations.

Assigning Priorities to Goals and Objectives

The identification of priorities and alternatives is a vital aspect of the planning process. Such identification, however, is often the most difficult aspect of planning. This is especially the case when goals, objectives and programs are interwoven and interdependent. Nevertheless, the assignment of priorities to selected goals and objectives is essential for responsible resource allocation decisions as long as resources are scarce and cannot equally satisfy all concerns.

The first step in the assignment of priorities to goals and objectives is to draw a distinction between primary goals and objectives and support goals and objectives. This distinction is derived from an understanding of the essential mission of the enterprise. Support goals and objectives are by no means superfluous or expendable. They are, on the contrary, essential to the viability of the enterprise. But the value and importance of support goals and objectives must always be assessed by reference to their utility for advancing the primary purposes of the enterprise.

Priority-setting among primary goals and objectives or among support goals and objectives is likely to be even more difficult and controversial than the endeavor to distinguish between primary and support goals or between primary and support objectives. Usually the importance attached to such goals or objectives will be reflected in a statement of the degree to which the goal or objective is to be attained, rather than in a ranking of goals and objectives from those which are indispensable to the organization to those which are not essential to its existence. But the determination of a point on a continuum of possible achievement which represents the importance attached to a goal or objective is often a matter of subjective judgement. Nevertheless, planning for assigning priorities to goals and objectives should aim at arriving at intersubjective and verifiable judgements. Actually accomplishing this sort of planning is one of the most difficult, and at the same time one of the most important, stages of the process.

It is recommended that each university: (1) Identify those persons who are responsible for formulating and revising statements of institutional goals and objectives; (2) Create procedures and formats for obtaining specification of goals and objectives in a manner which establishes a basis for program planning and evaluation; (3) Devise a taxonomy of institutional goals and objectives to assume the comprehensiveness of the formulation of institutional goals and objectives; and (4) Define criteria for determining the relative priorities among institutional goals and objectives.

IDENTIFYING PROGRAMS

Definition of Programs

Once the specification of goals and objectives has been accomplished, planning must proceed to describe a set of activities through which each goal and objective may be achieved. Specification of goals in operational terms leads to the design of activities and programs which will bring about the desired results. Planning may then concentrate on the efforts to maximize the effectiveness of programs as a means of achieving intended goals and objectives.

A program is a collection of related activities organized to contribute to the accomplishment of specific goals and objectives. Systematic planning indicates ends-oriented evaluation of the utility of programs. Viewing an educational institution as a system will enable planners to measure the utility of institutional processes (programs) through a comparison of the input from the environment into the system with the output from the system into the environment. The unit for making the comparison is, of course, the program. The essential task of planning is to establish programs that achieve institutional goals and objectives through an optimal utilization of resources.

Program Classification Structure

Program planning will be greatly aided by a comprehensive scheme for identifying and classifying institutional programs. For internal planning, a comprehensive taxonomy of institutional programs will direct program planning to consider all phases of institutional processes. A common program classification structure, which is shared by several institutions, will facilitate sharing of program data on an inter-institutional basis.

The Ohio Board of Regents has for some years used a program classification structure as the basis for estimating the resource requirements of programs. This structure is as follows:

1.0 Departmental Instruction and Research
- 1.1 General Studies
- 1.2 Technical Education
- 1.3 Baccalaureate General
- 1.4 Baccalaureate Professional
- 1.5 Master's Programs
- 1.6 Graduate Professional
- 1.7 Doctor's Programs
- 1.8 Medical Programs

2.0 Research
3.0 Public Services
4.0 Auxiliary Services
5.0 Student Aid

This structure is useful for estimating the costs of primary programs and has considerable utility for purposes of statewide planning. From the standpoint of institutional planning, however, the structure is inadequate because it fails to recognize that support programs, too, are units of program design, evaluation and budgeting. A taxonomy of institutional programs should explicitly identify all programs for which distinct design, evaluation, budgeting and control are to be assigned. For purposes of calculating unit costs of primary programs, of course, it will be necessary to establish a cross-over mechanism that assigns support costs to primary programs by appropriate loading formulae.

It is recommended that the Ohio Board of Regents establish, with the advice of institutional representatives of the state universities, a common program classification structure for the state universities of Ohio. This revised structure should be designed to: (1) satisfy the requirements of universities in program planning and evaluation; (2) maintain the instructional program classification structure currently used by the Ohio Board of Regents; (3) be

compatible with the state chart of accounts; and (4) be compatible with the NCHEMS at WICHE program classification structure.

For information purposes, a program structure as used by the University of Georgia, the Ohio State University, and WICHE is displayed in Appendix 2, 3 and 4 respectively. In addition, a program structure as developed by Robert Sandin of Toledo is exhibited in Appendix 5.

Program Planning

Program planning should be addressed to such questions as the following:

1. **What** action is necessary?
2. **Why** must it be done?
3. **Where** will it take place?
4. **When** will it take place?
5. **Who** will do it?
6. **How** will it be done?

When these questions are answered carefully and completely for every goal and objective, descriptive programs can be set forth in any planning document, for any organization unit or level.

The answer to the first question, **what** is necessary, indicates the types of activities and their sequence necessary to achieve the desired end result. A program(s) speaks to **what** is to be done with **what** resources, i.e., **what** is being accomplished (outputs) and **what** is being used (inputs). **What** is happening (or is expected to happen) is a program(s).

Why it must be done, alerts the planner to include only necessary activities. Those activities not contributing to the objectives are excluded.

Where it will take place, designates the specific physical location for the performance of each activity of the plan. All facilities must be available at the proper time for the planning to be meaningful.

The answer to **when** it will take place emphasizes the timing considerations. A definite beginning and ending time should be determined, not only for the entire course of action but also for each separate activity included in the plan.

Who will do it, establishes assigned duties and responsibilities for the members of the group.

Finally, **how** it will be done, brings out the manner of getting the work accomplished and serves as a review regarding the thoroughness in answering the first five questions. This last question actually checks the entire plan for completion and for direction toward the desired goal.

It might be said that programs can be identified by simply answering the first question "what action is necessary?" However, in this manual a program is not identified as such until all six questions can be thoroughly answered. For example, why identify a program if one doesn't know why it must exist? How can one have a program if it is not known **who** will undertake the program? Perhaps a trained person is not available on campus, or one cannot be recruited? Thus, an activity that is described as a program, and only answers the first question is only a skeleton and not a program as defined in this manual.

In summary, the planner who can thoroughly answer the questions of what, why, where, when, who, and how should be able to clearly identify activities that are necessary to attain the goals and objectives of a plan. In planning jargon, these activities are referred to as programs. Inherent in the identification of programs is the need to consider alternative programs.

Consideration of Alternative Programs

The planning process must make specific provision for encouraging the consideration of alternative possibilities in the design of activities and programs. University planning too often indicates a preoccupation with arranging for the continuation of existing activities and programs.

However, for educational institutions, most programs are, in fact, established and ongoing. Thus, emphasis should be placed upon planning for change and evaluation of established and ongoing programs. This type of planning appears particularly significant for the years ahead with the slowing pace of the growth of the universities. In the future, conditions may require more reallocation of existing resources as opposed to the acquisition and use of new resources to meet growth.

A key consideration in the choice of program alternatives should be the necessity for a program that will permit optimal utilization of available resources. Any judgement concerning the cost/benefit advantages of one program by comparison to other possible programs, however, requires knowledge of the utility of the program for accomplishing intended goals and objectives. Careful study is essential, therefore, during program design to measure the impact of alternative programs in terms of the goals and objectives of the programs.

Recommendations concerning choosing a program from among a series of possible alternatives which is optimal from a cost/benefit point of view are often more theoretical than practical. Cost/benefit analysis, indeed, is very difficult to conceptualize or to execute.

Rather than become entangled in an analysis that is too complex, it is suggested that university planners look at programs and ask two general questions: (1) What will the program cost? and (2) What are the expected results in terms of the goals and objectives by reference to which the program is justified? That is, planners should be primarily concerned with expected costs and benefits, rather than marginal analysis, utility analysis, etc.

The priority assigned to programs is largely a function of the priorities assigned to the goals and objectives which they are intended to achieve. However, in circumstances where resources are scarce, the comparative efficiency of programs in the utilization of institutional resources cannot be ignored. Thus, a highly efficient program from a cost/benefit standpoint might be assigned a higher priority in resource allocation decisions than an inefficient program, even though the more efficient program was addressed to goals and objectives which are deemed of lower priority than those of the inefficient program. This is only to observe that the ranking of programs in an order or priority is a most complex undertaking in which a number of different factors must be considered.

CALCULATING RESOURCE REQUIREMENTS OF PROGRAMS

Standard for Calculating Resource Requirements

Systematic planning must be concerned with questions such as the following: (1) Given that certain output (in terms of the realization of goals and objectives) is desired and given and that a certain program configuration is the optimal means for achieving the desired output, what minimum resources are required? (2) Assuming a fixed amount of resources are available, how can maximum output be achieved? In order to deal with such questions, it is necessary to have some idea of the amount of resources which programs should be expected to consume. Standards for calculating the resource requirements of programs are an indispensable tool of planning. However, in the present state of the art of planning, such standards are likely to be at best crude.

Examples of standards in the calculation of resource requirements of programs are the expenditure models for instructional programs which have been developed in recent years through research efforts of the Ohio Board of Regents. The Regents' models estimate, for example, that instructional programs in general studies should be expected to require (in terms of staff resources) one full-time-equivalent faculty member for every 24 full-time-equivalent students. Such a standard can aid in predicting the resources needed to maintain a general studies program for a given number of students. John D. Millett's monograph, **Planning, Programming, Budgeting for Ohio's Public Institutions of Higher Education** (Ohio Board of Regents, 1970) cites a number of similar standards (or "rules of thumb," as Millett calls them) which have had some use in Ohio in calculating the resource requirements of programs. Such standards, of course, are in the nature of averages which have been derived from a very large aggregate of program data, and they are of only limited application in institutional planning. But the methodology by which such standards have been derived illustrates the process by which institutional planners may obtain standards more applicable to their own special circumstances.

Simulation Models

Recently, researchers have developed several computer models which can assist university planners in calculating the resource requirements. The input for such models, which calculate the resource requirements of university operations under simulated conditions, is typically a set of data establishing the level and scope of services (e.g., enrollment data) and a set of standards for calculating resource requirements (e.g., student faculty rations, mean salary, etc.). **It is recommended that university planners seriously explore the utility of such models as aids to calculating the resource requirements of programs.**

COMPARING RESOURCE REQUIREMENTS TO AVAILABLE RESOURCES

Importance of Enrollment Forecasting

Planning for allocation of resources to implement programs requires realistic forecasting of income and recognition of the limits of available resources. Since most university income is dependent on enrollment levels, accurate forecasting of income requires accurate enrollment forecasting.

Indeed, reliable enrollment forecasts are essential for almost all of the quantitative aspects of university program planning. Miscalculation of enrollments can create chaos in a university, and the strain is especially painful when actual enrollments fall short of expectations.

Suggestions to Improve Enrollment Forecasting

Given the importance of good enrollment forecasting and the current state of the art, several suggestions can be offered to improve the process.

1. The OBR should maintain detailed attention to enrollment forecasting. **The OBR enrollment committee that was recently formed to work with institutions should be a permanent committee.** Personnel and other resources should be specifically funded for statewide enrollment studies.
2. The president and top administrators must recognize the importance of enrollment forecasting.
3. Specific responsibility and resources must be assigned for institutional enrollment studies.
4. Enrollment goals and objectives must be long-term, realistic and constantly evaluated. When necessary, enrollment goals and objectives must be changed to meet changing environmental and social trends.
5. The institutional methodology of estimating enrollments should be documented and communicated throughout the university.
6. Universities should make a concentrated effort to improve their methodologies of making enrollment projections. A student flow model should be designed and employed to project enrollment loading by instructional program.
7. Useful classifications of enrollment projections must be clearly identified; e.g., number of in-state students, number of out-of-state students, number of students by subsidy level, FTE students, day students, night student, retention rates, etc.

In addition to considering the foregoing suggestions, it is recommended that each university document other ideas and plan a specific program to improve enrollment projection. Also, it is important to note that every program and plan submitted for administrative consideration should have a section, where appropriate that deals with the subject of enrollments.

Forecasting Income and Expenditures

After programs have been defined, it is vital to calculate and forecast income and expenses for each program. Note, the emphasis is on calculating and forecasting **income** and expenditures, not calculating and forecasting resources.

When the planner considers expenditures, he should think of personnel, space, equipment and support services as resources, and convert the value of these to dollars. The planner also needs to think of them in terms of capital and operating dollars, or, put another way, one time and continuing dollars. At the same time, the planner must think of the possible sources of income.

Thus, it appears to be more meaningful to talk first in terms of income and expenses, rather than in terms of the allocation of resources.

Any plan submitted for review should have an estimate of the income and expenditures which are required for the plan. The sources of income should be designated and the expenditures should be expressed in terms of required resources. It is anticipated that when a plan is first conceived and submitted for review, the forecast of income and expenditures may in some cases be only an estimate. However, as plans are refined, the ability to forecast should improve to the extent that the forecast becomes more reliable.

The foregoing recommendation is important because too often proposed plans are reviewed and even approved without due consideration of both income and expenditures. The results may be evident in a building program that is never completed, a building that is constructed without adequate equipment, a building that cannot be properly cared for and maintained, an academic program that is without operating support, etc.

The planner must think of three levels of income and expenditures. The first level is income and expenditures for the development and refinement of plans. The second level is income and expenditures for implementation of plans, and the third level is income and expenditures for the operation phase of plans. Often too little attention is given to the income and expenditures necessary to develop effective plans. The result is often acting without a plan, or with ill-conceived plans, because resources are not adequately available to develop and refine the plans.

Methodology of Forecasting Income and Expenditures

The first important consideration in projecting income and expenditure is to clearly designate responsibility for this task. The responsibility may be assigned to the person(s) preparing the plan, the planning office, finance dept., etc. In all likelihood, the responsibility will be shared, but the important consideration is that the responsibility be clearly delineated.

Format for Forecasting Income and Expenditures

The format to use for forecasting income and expenditures will vary according to the educational institution and the type of plan. See Figure 5 for an illustration.

Because of the importance of ascertaining that a planning unit considers all aspects of income and expenditures in a plan, **it is recommended that an official, standardized format for forecasting income and expenditures be developed by each institution.** The following items of consideration, and the formats in the appendix should serve as a guide in developing a format that will fit the needs of each institution. These items, with appropriate additions and deletions, should be incorporated in a format for three different levels of planning: (1) Development, (2) Implementation, (3) Operational. Until all three levels are considered by the appropriate planning bodies, a rational decision cannot be made regarding the approval of a plan.

Figure 5

EXAMPLE FORMAT FOR FORECASTING INCOME AND EXPENDITURES

	Projection			
	1 Year	2 Years	5 Years	10 Years
I. Income				
1.0 Direct				
1.1 State Capital Funding				
1.2 Operating Funds				
1.3 Student Fees				
1.4 User Charges				
1.5 Reserves				
1.6 Sale Bonds				
1.7 Gifts				
1.8 Federal Government				
1.9 Matching Funds				
1.91 Other (Specify)				
2.0 Special Grants				
2.1 Loans				
2.2 Other (Specify)				
3.0 Indirect Overhead				
II. Expenditures				
1.0 Direct				
1.1 Personnel				
1.11 F T Planning Personnel				
1.12 Civil Service				
1.13 Other Salaries and Wages				
1.14 Other Personnel Directly Assigned to Planning				
1.15 Consultant's Fee				
1.16 Benefits				
1.2 Support Services				
1.21 Supplies				
1.22 Equipment				
1.23 Travel				
1.24 Computer Services				
1.25 Other Support Services				
1.3 Other Direct Cost (Specify)				
2.0 Indirect Cost				
2.1 Personnel Outside of the Major Planning Area, e.g., deans, department heads, vice presidents, presidents, etc.				
2.2 Significant Outside Support Services, Equipment, Supplies, etc.				
2.3 Instructional Overhead				

Factors to Consider when Forecasting

It is helpful when preparing income and expenditures projections to make a list of important considerations. For example:

1. Personnel costs will generally compose the greatest amount of expenditures in any planning activity.
2. The influence of inflation should be considered particularly in long-term projections.
3. Consideration must be given to the generally increasing rate of interest, particularly when going to the bond market.
4. The valuc of time is a matter deserving careful attention. Every day lost will cost money—the question is how much, and the problem is how to minimize lost time.
5. Every income and expenditure estimate will generally vary to some degree.
6. Unexpected emergencies will arise, e.g., strikes, bad weather, etc. How much will they cost and what contingency plans should be developed?
7. Nothing is free. A government grant, or a gift will often require matching funds. If not, it will generally need institutional funds for planning, or funds for operating after the plan is implemented.
8. Consequences must be anticipated should projected income fail to materialize at the rate anticipated or not at all.

ALLOCATING RESOURCES

Budgetary Planning

Assigning dollar values to the resources required for the conduct of activities and programs initiates the budgeting phase of the planning process. A budget is a financial plan for procuring and allocating the resources required to sustain programs over a specified planning period. Budgeting should always be regarded as an integral part of program planning; an instrument of planning for the achievement of institutional objectives. The budget is nothing but the institutional plan expressed in monetary terms.

Viewed from the perspective of systematic planning, the budget is a scheme for allocating scarce resources under the guidance of explicitly formulated judgments of value, in a way which maximizes the productivity of programs. The task of university planners is to allocate the available means in a manner which maximizes the utilization of resources for the achievement of institutional goals and objectives.

To require that every expenditure item in the budget produce a benefit which is worth its cost, it is necessary to view both the benefits and the cost of each budget item in comparison to the benefits and costs of other possible ways to utilize the same resources. An ideal budget is one that produces more valuable results than would be achieved if resources were allocated in any other way. The criticism of budgetary allocations, then, should proceed by way of an attempt to determine not whether each expenditure item represents something desirable or necessary in an absolute sense, but whether the planned distribution of expenditures can be expected to bring about results more valuable than could be obtained from alternative uses of the same funds.

There are practical difficulties, of course, in implementing such a theory of budgeting. The theory assumes the result of expenditures are measurable and the value of different results can be compared. But the value of services rendered by an educational institution is sometimes hard to specify. Furthermore, it is difficult to compare the value of results as different as those produced by pure research and custodial service. Consequently, many persons in universities tend to think of the budget as a compromise of value preferences concerning unlike ends, and they see no common basis for rationally assessing the values produced by expenditures. Budgeting seems to many persons to be an exercise of subjectivity and bias. But the aim of the planning process is to minimize subjectivity and maximize rationality in decisions concerning resource allocation.

Considerations for Installing an Effective Resource Process

There are four major considerations for installing an effective resource allocation process. These are: First, organization(s) and person(s) must be assigned responsibility for allocating resources; second, systematic procedures must be delineated for allocating and approving resource requests; third, criteria must be established to help ensure that rational consideration is given to a request for the use of resources; and fourth, an orderly process must be developed to communicate the allocation decisions.

One of the first considerations in allocating resources is the president's designation of the organization(s) and person(s) responsible for this task. Central in this decision is the decision of whether the allocations of resources is to be a centralized or a decentralized process. Although there may be exceptions, **it is recommended that a centralized organization be responsible for allocating resources.** (The issue of centralization and decentralization will be discussed in Chapter III). This recommendation is made because of the impact of one resource on another, e.g., personnel on space, space on equipment, etc. Because of the tremendous economic implications, it is vitally important to consider all of the required resources in a plan, and this recommendation will help ensure that this consideration is made.

Systematic Procedures for Allocating Resources

After the responsibilities of the designated organization have been defined, that organization should proceed to develop systematic procedures for the process of allocating and approving resources required for plans. The manual on program budgeting sets forth more detailed instructions concerning the allocation of resources. However, it is appropriate to suggest here some general guidelines which each institution should follow when developing allocation procedures.

First, **it is recommended that procedures for allocating resources be expressed in writing, distributed through the university community and updated on a regular basis.** It should be ascertained by the responsible organization that these procedures encompass **all** resources—personnel, space, equipment, and support services.

Some of the items that should be considered in allocation of resource procedures are:

1. A manning table of responsibilities and due dates for submitting a request for resources.
2. A flow chart that reveals the organizational direction of reviewing allocation procedures.
3. Narrative statements or charts to identify the process of approving the use of resources, e.g., committee review, open hearings, Board of Trustees approval, OBR review, etc.
4. Statements detailing the manner in which resources will be approved in committee meetings, administrators, etc. For example, committee decisions may be an open vote and by a quorum before recommendations are accepted by the president. Although different standards might be applied regarding the manner in which decisions will be made for various types of resources, these standards must be explicit.
5. The powers and the authority to make decisions or recommendations must be clearly delineated for organizations and individuals involved in allocating resources.

Criteria for Making Allocation Decisions

Another major consideration in the allocation of resources is to develop and follow a criteria for making allocation decisions. In order to do this, a decision must be made to determine the items or areas which will be considered in developing a criteria; and secondly, the importance of each item or area must be determined.

In order to make an intelligent decision for allocating resources, the resources must be placed in perspective with the overall plan. In other words, the plan must first be evaluated in terms of pre-selected criteria, and then resources are allocated in accordance with the available funds.

PLANNING FOR A SYSTEM OF PROGRAM MANAGEMENT

Organizational Planning

After resources have been allocated and communicated, plans must be developed for implementation and management. These steps in the planning process are encompassed by the scope of program management. However, the implementation of plans and the management thereof is predicated on organizational planning. Organizational planning is the arrangement of resources assigned to carry out a program to produce an integrated structure which will promote maximum effectiveness and efficiency. It includes assignment of staff personnel to program activities and the delegation of authority to carry on the activities, procurement of necessary supplies, services and equipment, and the arrangement of physical facilities. Organizational planning is also concerned with the following questions: What sectors, groups and structures are involved in planning and decision making? What is the effectiveness of different organizational structures? What is the cost of different organizational structures?

PLANNING AS A CYCLICAL AND CONTINUOUS PROCESS

An administrator should develop a frame of mind favorable to organizational planning. He should consider that inevitable changes will face the institution, and will bring about conditions necessitating changes in his managerial organizing work. Constructive organizational changes will be required to improve productivity, induce efficiency, enhance morale, and help implement the plans of the institution.

Also of basic importance is a searching look at the contribution of the organizing work to determine whether all essential functions are identified and adequate. These activities may be performed, but the question is: "Are these activities compatible with current plans?"

Steps in Organizational Planning

The major steps in organizational planning include:

1. **State the goals and objectives.**
   Is the university expanding or contracting? Is it offering new or improved programs? What programs and services are being cut back or deleted? Are the goals and objectives realistic? Do the goals and objectives recognize the experiences and resources available to the institution?
2. **Formulate the ideal organization believed best to meet the goals and objectives.**
   In what ways should the university be built to best meet the future needs? What new departments should be added, and which should be eliminated? In what way can present employees' effort be made more effective by the ideal organization?
3. **Inventory the existent organizational structure.** What are the current organizational units? What activities are included in each? What are the relationships among the managers of each respective department and division? When was the organization last revised? What changes were made at that time?
4. **Prepare written job descriptions of duties and authority of each administrative job.** Included in this step are the objectives of each managerial job; specific activities required to carry out these intents, duties and authority. Also included, the extent of supervision provided; sources of advice, counsel and instructions.
5. **Compare job descriptions with existent organization and identify areas that appear to need revision.** This includes areas representing needless duplication, as well as omission of necessary areas.
6. **Compare tentative revised existent organization to ideal organization formulated under step No. 2.** What major adjustments appear necessary? Can the structure be simplified? Can areas of operation be clarified and communications improved?
7. **Formulate recommended organizational units for future use.** What are the specific activities and authority required by the manager of each department or division to attain his goals and objectives? Are relationships among organizational units spelled out? Is standard and uniform terminology being used? Are all possible trouble areas eliminated?

8. **Prepare phase charts indicating the estimated periods of time to reach the recommended future organization.** Should the recommended changes be accomplished in one jump, or by a series of gradual alterations? What strategy in time scheduling should be followed?
9. **Obtain official approval for the proposed organizational changes.** What benefits will be derived from the changes? What are the income and expense considerations of the proposed organizational changes?

Implementation

The work of planning and organizing is insufficient to get work accomplished. The plans and the organized efforts must be implemented. Implementation means putting or moving the plan into action. No tangible output is achieved until the implementation function is performed.

Among the more important factors pertinent to planning for implementation are: (1) Attitude of top administrators toward planning in the institution, (2) relations between faculty, students and administrators, (3) the period over which the implementation is to take place, and (4) the availability of money and resources to carry out the implementation plans.

The backing by top administrators is fundamental in the successful application of every plan, and it is particularly necessary for plans for implementing. The development and operations of an implementation program is conditioned by top managers' viewpoints toward members of the educational institutions. Whatever the dominant view, be it positive or negative, it will directly influence the courses of implementation action that will follow.

Conversely, in the planning for implementation, a clear picture of faculty, supporting personnel and students attitudes toward top management is of prime importance. A program of activity designed without taking into account the feelings and beliefs of all segments of the school has little chance of success. It is doubtful that all such views can be incorporated into a managerial plan of implementation, but a sincere effort must be made.

Time considerations are another basic factor of plans dealing with implementation. Normally, such plans should encompass fairly long period, because implementation is not generally achieved within several weeks or even months. Planning is time consuming and requires much patience and consistent effort. Furthermore, many members of the university community may be skeptical and not quite "sold" on the plan at its initial introduction. However, time often permits the opportunity to see the plan in action, to experience its benefits, and can enhance its chances for acceptance. In addition, plans for implementation require continuous development, they are not a now-you-do-it, now-you-don't type of activity.

Finally, the factor of the availability of funds and of staff to perform the work is usually of major significance in implementing programs. Economically, a program for implementation should pay for itself in the benefits and values gained from the program. However, many times these values are difficult to measure and the program cannot be justified economically with the same precision as perhaps programs in other areas. Likewise, trained people to implement the actuating program are of major importance and must be included

as an important part of the implementation plan. Thus, the extent, inclusiveness and content of the implementation planning is influenced significantly by the available funds and staff.

Steps in Implementation Planning

For every plan approved and funded, it is recommended that specific responsibility be assigned for implementation. The following guidelines should provide some direction for individuals charged with the responsibility of implementation.

1. **Recognize the goals and objectives.** Make certain the goals and objectives currently being sought are compatible with efforts in other major areas and are attainable—not impractical dreams.
2. **Establish a detailed program.** This should include a step-by-step listing of all activities to take place in their prescribed sequence. Participation by employees is encouraged; their feelings and ideas regarding the program can be included in the program's formulation.
3. **Estimate the time and cost.** Completion dates should be set for each step of the program, with provisions for the unexpected. Some will require longer periods than anticipated, and others will be successfully concluded in record time. In addition, estimates should be prepared to show the amount of expenditures involved and the source of funds.
4. **Obtain approval and put the program into operation.** Approval of the implementation program can be helpful in the efforts win the backing of top managers. Initiating the program into action begins with thorough indoctrination of those being affected by it so they understand what is being undertaken and why. Employee participation, as mentioned under Step No. 2, usually helps to gain greater acceptance. Converting the idea into reality is frequently difficult, and sufficient time and flexibility in putting the program into action must be allowed.
5. **Evaluate accomplishments of program.** Implementing results are usually difficult to evaluate, but some follow-up should be made in order to (1) discover ideas and techniques for improving future programs, and (2) justify the continuance or discontinuance of the program.

Controlling (Evaluating) Programs

Planning for program evaluation is concerned with assessing performance and informing managers of comparisons between that which is being accomplished and that which should be accomplished in keeping with the master plan of goals and objectives. Usually there are many means available to determine whether an assignment is being executed as intended, but they are not readily available or timely without sufficent planning. Effective controls just don't happen; they must be planned for and given careful consideration.

Controlling is the follow-up to the other three fundamental functions of management. It helps to ensure that what is intended to be accomplished is

completed, and that the various efforts are maintained in their correct interrelationships to permit adequate coordination. There can, in fact, be no controlling without previous planning, organizing and implementing.

Emphasis needs to be given to the fact that control is ultimately related to the other fundamental functions of management. The best planning includes consideration for performing the controlling function. Similarly, organizing and actuating efforts should take into account control considerations. When proper consideration is made, the control function is made less difficult and more effective.

Steps in the Control and Evaluation Process

The control process consists of several definite steps fundamental to all managerial controlling. Regardless of the program, the same basic control process applies. Three basic steps are:

1. Developing the standards or basis for control. (This is accomplished when one developes objectives.)
2. Measuring the performance.
3. Comparing performance with the standard and ascertaining the difference, if any.
4. Correcting deviation by means of remedial action.

The concept of the control process is shown graphically in Figure 6. Beginning at A, the standard or basis of control is first determined. Next B, the performance is measured. At C, comparison is then made between performance and the standard or control basis to determine whether performance is above, below, or the same as the standard or control basis. The difference between the standard and performance, D, sets the amount of correction necessary to provide satisfactory performance. The remedial action may be any of a number of possibilities, including a change in organizing or implementing, a revision of the standard, or modification in the planning.

Types of Standards

Any activity can be controlled with regard to any one or all of the following factors:

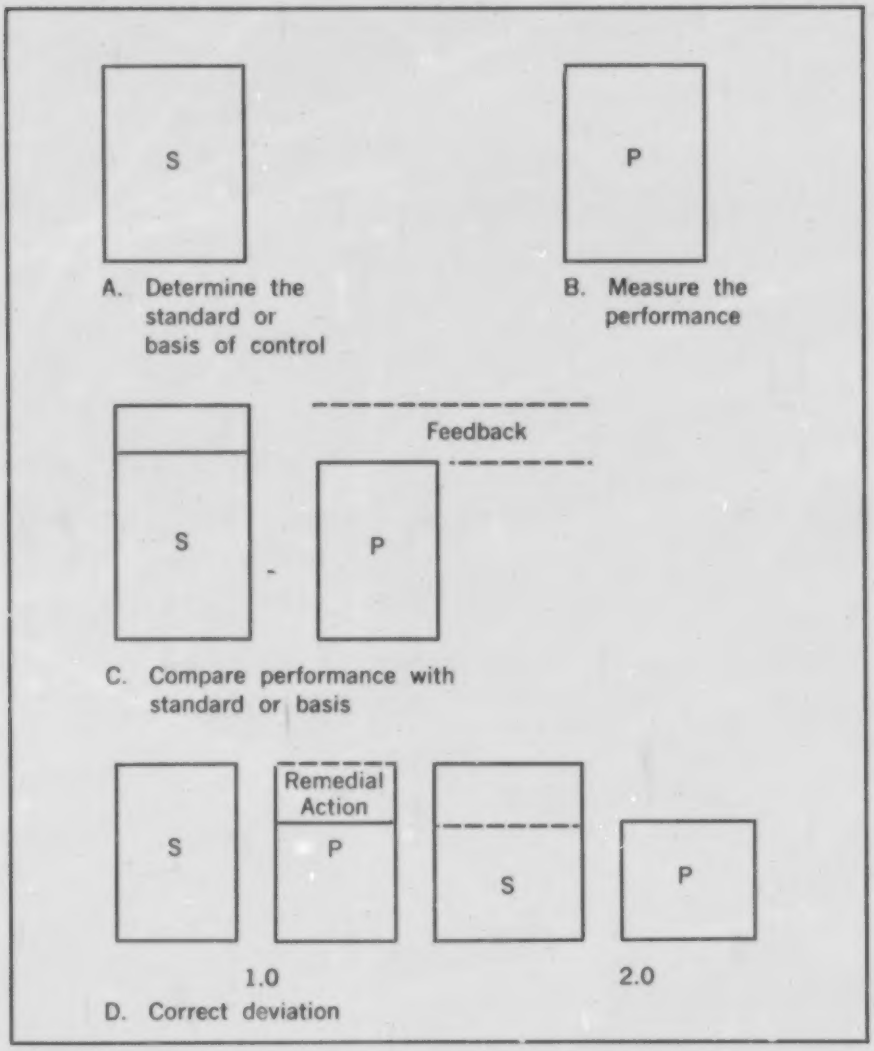
1. Quantity
2. Quality
3. Cost
4. Time

To illustrate, consider the activities of an educational institution. Quantity standards of the institution can be controlled with reference to the number of credit hours produced, the number of graduates, the ratio of faculty to students, etc. Quality standards can be used as the control factor through standardized tests, number of graduates obtaining a job or going to graduate school, the number of dropouts, accreditation agencies, educational level and experience of faculty and administrators and often predetermined measures of quality.

The costs of graduate students could be predetermined and budgeted to keep expenses within desired limits. Finally, time can almost always be employed as a standard. A timetable or schedule could be worked out for achieving certain goals and objectives at certain dates. If actual performance deviates from the scheduled times, corrective action could be applied.

Figure 6

THE CONTROL/EVALUATION PROCESS



Because of the overall importance and need for evaluation, **it is recommended that every plan contain a set of standards by which programs can be controlled.** Every program will differ, but standards should generally be set in the areas of personnel, space, equipment and support services. Again, factors to consider are quantity, quality, cost and time.

Standards are difficult to agree upon, particularly among administrators and faculty and other institutions. Nonetheless, standards must be established and used to evaluate what actually happened with the plan. When this step is accomplished, the planning cycle is repeated with a new look at goals and objectives.

The Planning Cycle

All evaluative analysis of programs must be conducted within the framework of avowed goals and objectives. Criteria for measuring the effectiveness of programs and specifying a direction of control can be formulated only if one knows what it is that is supposed to be accomplished through the programs. The concept of the university, an understanding of its mission, is ultimately the basis for evaluating both the form of activities and the adequacy of work performance. The evaluation stage of the planning process, therefore, brings us back to a reconsideration of goals and objectives. The planning process comes full circle. Both the foundation and the result of program evaluation are a clear and precise formulation of goals.

Evaluation of Goals and Objectives

Iteration of the various steps in the planning process may be necessary before the full implications of initial formulations of goals and objectives can be made explicit. The planning process may then become an occasion for reviewing and reappraising the understanding of goals and objectives from which the process began. The planning cycle may, at any number of points, call for a reappraisal of goals and objectives, to verify their appropriateness for the institution. Just as evaluation may initiate a feedback loop to the stage of redesigning programs which prove to be ineffective, so evaluation may also initiate a larger feedback loop to the earliest stages of the planning process, viz. to the stage of reconsidering goals and objectives which prove to be unrealistic or inappropriate. The pursuit of the planning process through all the stages that we have distinguished may prove, in fact, to be the best way to reach clarity concerning the essential goals and objectives of an enterprise.

Evaluation of the Planning Process

Evaluation should be addressed, furthermore, to the planning process itself, because that process is implemented in a given institution. Planning is itself an activity which consumes resources for the sake of achieving a purpose, in this case, the improvement of management in the university. The effectiveness of the program of institutional planning must be assessed to determine the extent to which the intended objectives are actually being achieved. The activity of conducting cost/benefit analysis of programs, for

example, must itself be subjected to a cost/benefit analysis, since that activity, too, consumes resources which might be used in some other way. The effectiveness and efficiency of the planning organization, the utility of resource requirements prediction models, the reliability of enrollment and income forecasts, and the quality of decisions regarding the allocation of resources all require evaluation and control. The evaluation stage of the planning process must not neglect to cast its searching light upon itself.

In conclusion of Chapter II, we can indeed, say that good planning is a cyclical and continuous process.

3. Organization of the Planning Function

ESTABLISHING A FORMALIZED PLANNING EFFORT

Commitment to Planning

As previously stated, one of the major functions of management is to organize for planning. Responsibilities must be assigned to personnel, an effective communications network must be developed for participants in the planning process, and channels and levels of decision-making must be clarified.

The process of formal educational planning can proceed, once the commitment of the president and top level administrators is clearly established. Until a commitment to planning is made by the president, little significant planning will occur. For planning to be successful, the president must, in most cases, be fully involved in the planning process. The depth of his commitment must be unequivocably impressed on the administrative staff, faculty and other members of the university community.

Where to Start Planning

After a commitment has been made to planning, the president may ask, "Where do we begin?" Simply stated, the place to start planning is where the greatest needs exist. However, this decision cannot be effectively made until the president has reviewed the planning process and taken an inventory of planning needs. For example, a president's list of planning needs might look as follows:

1. Need a new enrollment plan.
2. Need to educate administrators and faculty of the role and importance of planning.
3. Need an improved statement of institutional goals and objectives.
4. Need a director of planning and a staff.
5. Need a comprehensive institutional plan—as requested by the Ohio Board of Regents.

After an inventory and evaluation of planning needs, the president should be in a position to know where to begin the organization of the planning function. In our foregoing example, the president may first, begin with Education (#2) and secondly, proceed to the appointment of a planning director (#4).

After deciding when to start planning, the president should then be in a better position to plan for the most appropriate planning organization. The possibilities for organization range from a highly centralized to a very decentralized decision-making process, depending upon the nature of the institution. (Organizations will be discussed in more detail under the section dealing with centralization and decentralization.)

ORGANIZATION OF THE PLANNING FUNCTION

Methods of Organizing

Some of the possible methods of organizing are as follows:

1. No effort is made to formalized planning. Planning is a part of each administrator's duties.
2. Formal planning is executed only in certain areas of the university, e.g., physical planning.
3. Centralized planning is accomplished in a planning department; no planning executives or staff exist in the departments or colleges.
4. Planning is carried out by a planning executive and staff at both a central administrative office and in the operating units of departments and colleges.

Steps in Organizing a Planning Office

To initiate a planning organization in an orderly fashion, the following steps are suggested.

1. **Know the goals and objectives.** The organizing efforts must be in keeping with the work to be accomplished. Organizing a planning office is not a panacea which is applied in specific and equal dosages to all educational institutions. The goals and objectives are important because they determine the fundamental organization requirements.
2. **Inventory the current planning organization.** Are the duties and responsibilities of the planning officials clearly specified? Do the people filling these positions have the necessary training and experience?
3. **Break down the planning work to be accomplished into component activities.** Preferably the list of activities should be quite extensive, although not to the point of including minute details. Ordinarily, some planning activities will be subordinate to other activities, but all should be listed.
4. **Group the planning activities into practical units.** Similarity of activities could be used for this grouping. For example, the operating budget and the capital budget would probably be grouped under finance. (It should be recognized that there are differences in the time frame of the two types of budgets. The capital is "one-time money" while the other is ongoing.) The instructional program and research program would be grouped under the educational plan. In the foregoing examples, the main groups have been determined functionally. Other bases for planning could be used such as undergraduate education, graduate education, or by geographical location, such as main campus, branch campus, etc.
5. **For each planning activity or group of activities to be performed, define clearly the duties to be carried out and provide the physical means and environment required.** This amplifies that which is expected of the individual or group who is to execute each planning activity or group of activities and sees that they have the physical tools with

which to work. It adds substance to the work to be done, makes the organizer decide exactly what is to be accomplished, and provides the employee with a concise statement of what planning action is expected. Titles or other identifications should be assigned to each job. It should be noted that the grouping of planning activities as outlined in Step No. 4 is not necessarily related to assignment of the work. Assignment of work logically follows after the planning activities themselves have been identified and grouped.

6. **Assign qualified personnel and other resources.** After the planning of job content has been determined, its relative importance established, and the duties set forth, the next step in developing a planning organization is to file the jobs with qualified personnel. In the case of reorganizing an existing organizational structure, the qualifications of the incumbent employees would be compared to the requirements of their respective jobs. For each employee, approval, recommendations for training or transfer would follow. In certain situations, e.g., the chief planning officer, it might be desirable to recruit from the outside. In contrast, sometimes, it is necessary or desirable to utilize existing personnel. If using existing personnel, Steps Nos. 4 and 5 are carried out with this thought in mind.
   After personnel have been assigned, they must be given money and other resources. If planning is to succeed, it is absolutely essential for the university to make a financial commitment to planning.
7. **Delegate the required planning authority to the assigned personnel.** To each employee, authority necessary to accomplish his specific work must be granted. Also each member of the planning group must know the activities he is expected to perform, and also his relationship to others in the planning organization. All planning personnel from the highest to the lowest level in the structure should have a thorough understanding of the organization structure, knowledge of why it is arranged as it is, and a comprehensive knowledge of their respective locations and obligations in relation to the whole.

The foregoing steps in organizing a planning organization are basic and apply not only to any type of educational institution but to any part, e.g., department, as well. Organizing is performed by educational administrators at all levels, but the fundamental process remains the same on all levels.

It should not be inferred that other step-by-step procedures to organizing a planning operation are to be avoided. Planning for organization, like most administrative work, requires consideration of many factors. Some of these factors might conveniently be classified as internal and external factors that influence the planning process.

INTERNAL FACTORS THAT INFLUENCE THE PLANNING PROCESS

Policies and procedures deal with future courses of action and as such affect the planning process. Both policies and procedures are essential for the effective management of an educational institution. However, a policy is not the same as a procedure, although the two are commonly used interchangeably.

Definition of Policy

A policy is a verbal, written, or implied overall guide setting up boundaries that supply the general limits and direction in which managerial action will take place. Policies are used to help keep decisions within the areas intended by the planning since they provide for some consistency in decision-making in particular situations usually under repetitive conditions.

Policies are broad, comprehensive, elastic and dynamic guides. They require interpretation in their use by administrators. A policy does not tell an administrator exactly what to do.

In the typical university, there are many kinds or types of policies. It is possible to classify policies on the basis of their characteristics, including such things as purpose, use, subject, extent of influence, function, written or unwritten, etc.

Classification of Policies

One classification of policies helpful in reviewing policy is that based on the organizational levels of administrators. That is to say, there are policies which are used primarily by top level administrators, other policies by middle level administrators, e.g., college dean, and still other policies which are applicable to departmental heads and other supervisors. See Figure 7.

Figure 7

CLASSIFICATION OF POLICIES BY ORGANIZATIONAL LEVEL

Type of Policy	Mainly Used By	Extent of Influence	Scope	Importance
Basic	Top Administration	Affect every unit of the university	Very Broad	Greatest
General	College Deans and Division Directors	Sometimes apply to all but frequently to large segments of the university only	Specific and somewhat limited	Medium
Departmental	Department Chairman and Supervisors	Apply to activities of Department for meeting everyday requirements	Definite and limited nature	Least

Another helpful classification of policies is that based on their sources, including policies that are (1) imposed, or (2) originated. Imposed policies include those policies arising as a result of some external force such as federal or state government, the Ohio Board of Regents and accrediting associations.

An originated policy includes those started by educational administrators in order to have needed guides established for their own and their subordinates use in managing the university.

Another common classification of policies is by function, e.g., finance, education, personnel, planning, etc. Figure 8 supplies examples of these.

Figure 8

EXAMPLES OF POLICIES BY FUNCTION

Finance Policies

1. Have a balanced budget
2. Prepare long-term financial plans
3. Obtain as much outside financial support as possible
4. Maintain low tuition
5. Invest surplus cash

Personnel

1. Maintain a centralized personnel office
2. Post and advertise all job vacancies of the university
3. Promote from within when possible
4. Compensate employees at competitive wages
5. Actively recruit and place university employees

Planning

1. Maintain a centralized planning office
2. Budgeting and account for planning expenditure
3. Every administrative head and supervisor is responsible for planning
4. All plans must be documented
5. Every administrator and faculty person is to be introduced to the planning process

Educational

1. Every student should have the opportunity to take elective courses
2. Every student should have an academic advisory
3. Extra curricular activities are encouraged to supplement formal classroom teaching
4. Every faculty member and course offering is to be evaluated on a regular basis
5. Faculty members are given time off and support for research, publishing and seminars

As one can infer from the foregoing examples, there is a wealth of policies that exist at most educational institutions. All of these policies, some of which are implied rather than being stated in writing affect the planning process. Therefore, it is important that all policies within a university should be integrated so that uniform, orderly, and efficient execution of planning work can follow. Thus, **it is recommended that the planning department or other responsible office, such as systems be changed with the responsibility of compiling and updating an inventory of university policies.** Miami University has an excellent model to follow.

Definition of Procedures

As contrasted to a policy, a procedure is a series of related tasks that make up the chronological sequence once the way of performing the work is established. The tasks are determined and related by means of planning in accordance with what is believed necessary to accomplish the work. The chronological sequence of these tasks is a distinguishing mark of any procedure.

A procedure is specific; it is usually tailor-made to achieve the specific work for which its use is recommended. In contrast, policies supply the general areas within which the procedures must operate. Whereas a policy requires a "great deal" of interpretation for its use, a procedure requires "little or no" interpretation.

It is recommended that a procedure manual be developed along with or incorporated with a university policies manual.

Several universities including Ohio University and Ohio State University have made significant progress in developing and maintaining a procedures manual.

Because of the detailed nature of procedures, it may be desirable to assign the responsibiilty of developing procedures to the Systems Department. They should, of course, work closely with the Planning Department and all appropriate segments of the university.

Other Internal Factors Affecting Planning

In addition, to policies and procedures that affect the planning process, there are numerous other internal factors to consider. Some of these are: personnel attitude and knowledge of the planning process, adequate staff for planning, growth or declining enrollments, size of the institution, types of educational programs offered, political power bases within the university, physical facilities, support services available for planning and the overall financial ability of the university. When organizing the planning function, the president and other chief administrators must recognize and appraise all the internal factors that influence the planning process.

In addition to internal factors that affect the planning process, there are a number of external factors to consider. Some of these are:

1. Legislative action and interest. For example, H. B. 475; The Warren King Study; attempts to set faculty workload standards; increased dissatisfaction with higher education in general etc. All of these factors and others must be closely monitored and interpreted while planning the future course of the university.
2. The Ohio Board of Regents serves the valuable function of coordination of policies between member institutions, the Legislature and the governor. As such, it must maintain a close liaison with the member institutions, the Legislature and the governor.

   The Ohio Board of Regents policies are outlined in a master plan for education. In addition, decisions are made at almost every Board of Regents meeting that affect the planning operation of at least one institution. Recognizing the scope, power, role and authority of the Ohio Board of Regents, it behooves every institution to be knowledgeable of the workings and policies of this organization. Indeed before

some institutional plans, e.g., new academic programs, capital programs financed by state funds, etc. can be implemented, they must have the official approval of the Ohio Board of Regents. It is safe to say that many institutions of higher education in Ohio could improve their overall planning process simply by being more fully informed of the Ohio Board of Regents and its role in higher education.

3. Citizens. Universities need to be more aware of the sentiments of citizens. At no time in the history of education have citizens been more critical of higher education. Universities need to know why citizens feel as they do and take positive action to meet changing attitudinal and societal needs. Citizens are concerned with higher taxes, higher tuition and graduates who can't find jobs. Planners must find a way to alleviate these concerns.

4. Other external factors. There are a host of other external factors, such as alumni, federal agencies, foundations and local government that affect the planning process. These factors must be recognized and evaluated in terms of their impact on the planning process. This is a very delicate and difficult process, because the planner must consider these outside factors and incorporate them where it is important. Although they are important, outside factors should not provide the sole direction of the university.

Earlier in this chapter, some basic steps were suggested as a guideline in organizing a planning office. These guidelines can be followed by an educational institution. However, in establishing a planning department, all the internal and external factors affecting a particular university will somewhat alter the planning organization. This is the way it should be. Carbon copy planning organization is not necessarily desirable. The important point is that every university should improve its planning organization through a systematic study of internal and external factors.

THE SCOPE OF THE PLANNING EFFORT

The scope of the planning process is dependent upon the beliefs and concepts of the president and other high level administration offices. Some of the key issues to consider are the time horizons of planning and centralization vs. decentralization planning.

Time Horizons

All planning deals with the future, and the future is measured in time. Hence, it is convenient and acceptable to think of different kinds of planning in terms of the time horizons for which the planning is intended. The classification of Long-range Planning, (LRP), and Short-range Planning, (SRP), have come into common use and are so used in this manual.

Differences of opinion exist on the number of years that qualify certain

planning as long-range, and short-range. In this manual, we have assigned some arbitrary time values as follows:

Short-range	2 years or less
Long-range	3-10 years or longer

Long-range planning and short-range planning should be integrated with the latter fitting in and contributing toward the achievement of the long-range goals. Examination from time to time should reveal whether proper integration is being achieved.

The usual problem is that short-range planning is adopted but does not contribute to the long-range plan. An immediate opportunity is seized; and in the urgency of the situation, the long-range goals and objectives are slighted. For example, a university needing space for the arts and science department adds an addition to the present building. But this addition was not in keeping with the long-range planning to construct a modern new building. Immediate needs for space were satisfied, but the long-range requirements were ignored.

On the other hand, there are examples where development over a short-range and revealed by short-range planning suggests changes be made in long-range planning. To illustrate long-range plans may call for a new dormitory complex. However, student housing statistics and declining enrollments may suggest that the long-range plan is not presently valid. All this points out is that conditions do change and all planning should become a continuous process because the future is unknown.

Long-range planning and short-range planning should be tied together. Long-range planning gives perspective to short-range planning. Plans for the next year or two tend to become historical projections until given fuller meaning by relating to the long view. Long-range plans become realities by means of short-range plans that are coordinated with the long-range planning.

Intermediate Range-Plans

Consideration of the effect of short-range plans upon long-range plans emphasizes the step-by-step approach to the future and suggest consideration of intermediate-range planning. Indeed, there are planners who maintain that the planning process is not the weakness in the area of long-range planning, but rather in lack of attention to intermediate-range planning. In this manual, we have focused on the long-range and the short-range, for convenience sake, but it does not mitigate the need to focus on intermediate planning. For those institutions desiring to subdivide plans into three time horizons, the following guidelines could be used:

Short-range	2 years or less
Intermediate-range	3-6 years
Long-range	7 years or longer

It is to be understood that the amount of detail and accuracy in projecting plans will vary inversely to the length of time. That is, we should have more facts and knowledge today in making projection for the short-term than we

will for the long-term. Thus, more detailed and accurate projection with fewer assumptions for the first few years of a plan should be more evident than for the last few years.

Centralization and Decentralization

Another important concept that relates to the scope of planning and has a great deal of affect on the organization of the planning office is centralization and decentralization in the organizational structure. In management, the former identifies concentration of authority, while the latter that of dispersion of authority. The controlling issue is how much authority is delegated to subordinates.

Actually, there is some decentralization of authority in every organizational structure, otherwise the structure could not exist, that is all authority would be vested in the president. Likewise a manager cannot delegate all his authority for by so doing, he ceases to be a manager. Hence, centralization and decentralization can be thought of as two theoretical extremes, neither of which are found in actual practice; but the concept of each one is helpful in organizing for the planning function.

To illustrate the concept of centralization reference should be made to Figures 9 and 10.

Figure 9

A SIMPLIFIED ORGANIZATIONAL STRUCTURE FEATURING THE CENTRALIZATION CONCEPT OF THE PLANNING FUNCTION

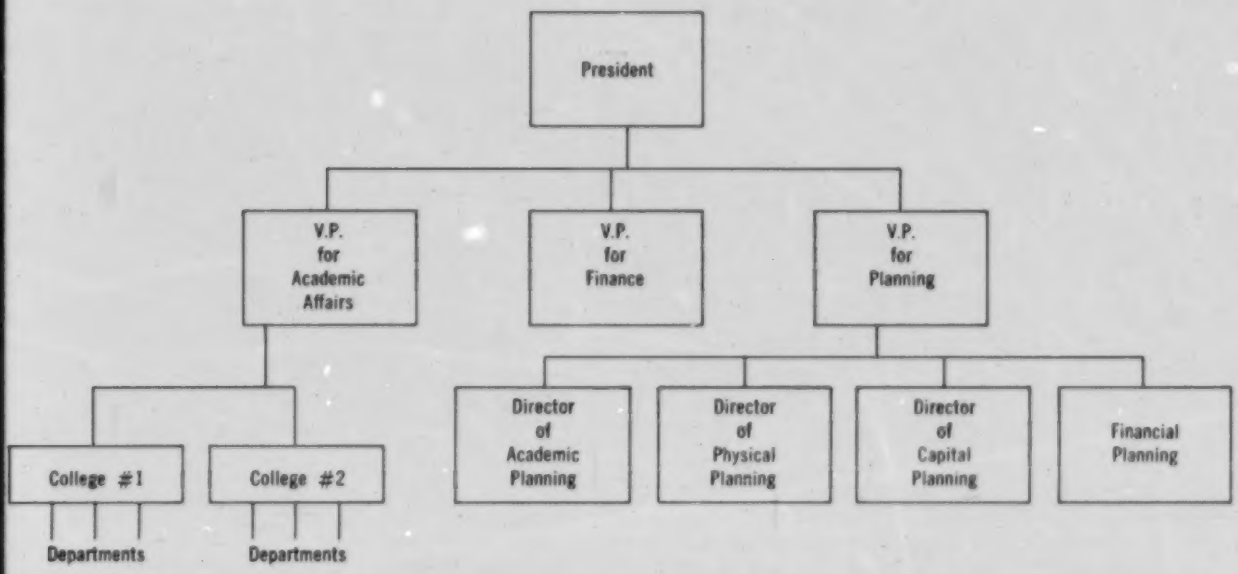
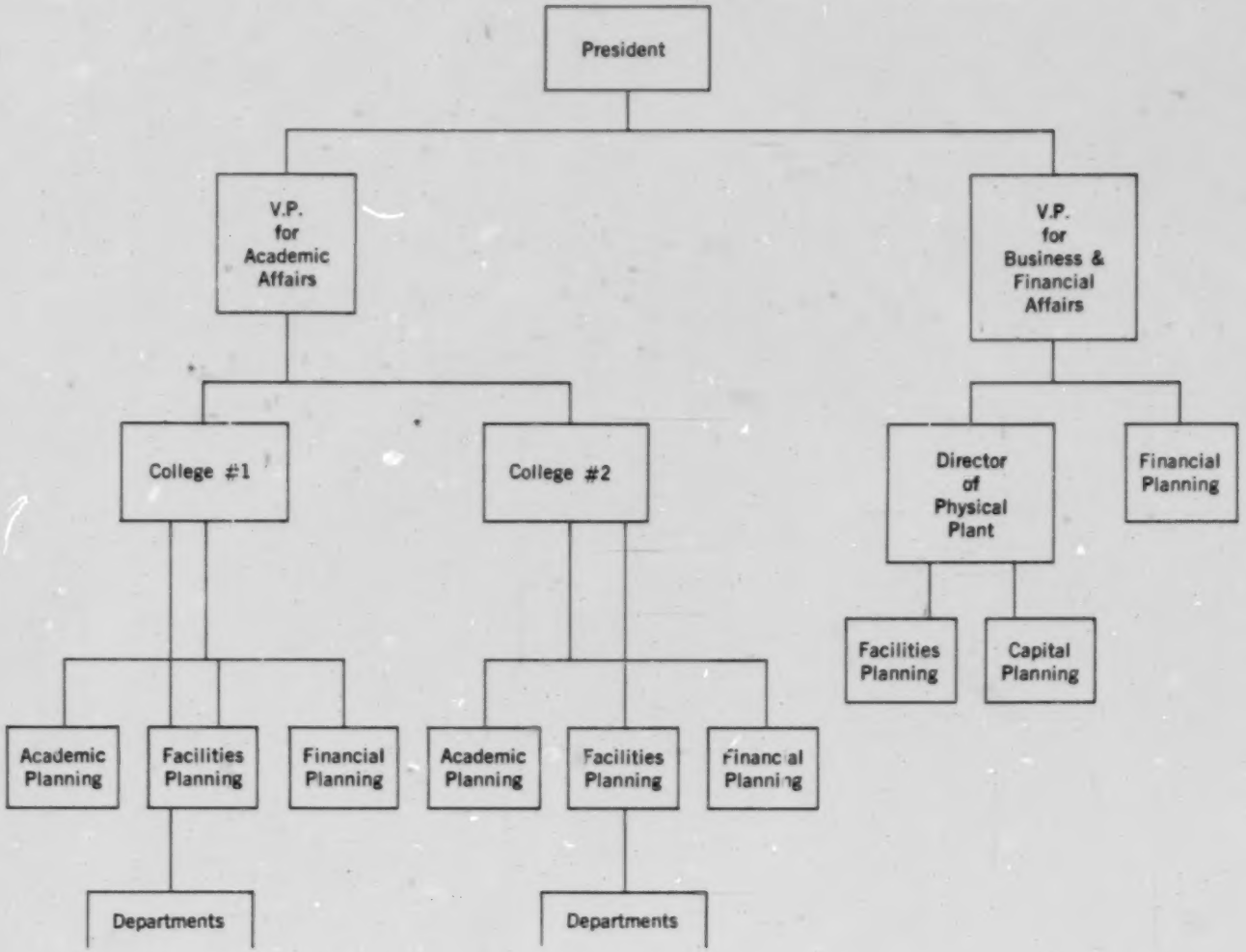


Figure 10

A SIMPLIFIED ORGANIZATIONAL STRUCTURE FEATURING
DECENTRALIZATION CONCEPT OF THE PLANNING FUNCTION



An examination of Figures 9 and 10 should quickly reveal that probably no university would organize its planning function along the lines indicated. For example, in Figure 9, the planning function is viewed as being the responsibility of one vice president and a central staff. The other vice presidents are not given any planning responsibilities.

In Figure 10, the planning responsibility is dispersed and duplicated among a number of administrators with no central control.

As previously stated, planning is a responsibility of every administrator. However, in order to provide a positive direction for the university, some central control must be exerted because of diverse opinions. Thus, it appears that the "best" form of organizing for the planning function is to combine features of centralization and decentralization. The problem is to determine the degree of centralization or decentralization.

Centralization vs. Decentralization

The determination of a centralized planning organization as well as the centralized allocation of resources poses many questions. Are they one and the same? Does the centralized planning staff develop all goals and objectives themselves? Draft all of the plans? Do they actually allocate all resources? On the other hand, does the central planning staff coordinate the process? Do they assist the process by providing data, cost studies, projections, etc.? Design and operate the process? Handle involvement questions?

To assist in answering the questions of how much centralization or decentralization is desirable at individual institutions the following guidelines should be helpful.

1. There should be someone charged with the responsibility for designing, implementing, and evaluating the planning process.
2. The same person **therefore** must be also recognized as responsible for the resource allocation **process** (budgeting) because that is an integral part of the planning process.
3. Responsibility for **process,** though obviously important and necessary, does not **necessarily** imply responsibility for creating plans, or allocating resources, or any other operational decisions.
4. The person so designated in 1 and 2 above must be sure that, among other things, clear responsibility must be delineated and understood for such items as
    a. enrollment projections
    b. cost studies and data
    c. forms and format design
    d. systems and data processing support to the process
    e. income and expense projections
    f. process deadlines
    g. involvement methodology
    h. etc.
5. The issue of centrality versus decentrality reaches its impasse when considering point 4 above. **All or some of the offices providing those**

functions could be organizationally placed under the individual, or he could merely make sure that wherever located, they understand their responsibilities.

6. If a decentralized mode is chosen, the person responsible under 1 and 2 above must be a very top level administrator so that he can impact the other offices. Thus, he must be Executive V.P., V.P. for Academic Affairs, V.P. for Business, President, etc. If a centralized mode is chosen and all the planning support functions are under his direction, he could be as above, or in some slightly less powerful position. Regardless of which mode, the designation obviously depends a great deal upon the modus operandi of the president and his chief aides, as well as the power structure therein contained.

This problem of centralization vs. decentralization must ultimately be solved at the individual institutions. It should be helpful, however, to consider some of the advantages of centralization and decentralization.

Advantages of centralization planning organization:

1. Visibility, power, and prestige are provided to the chief planning officers.
2. Uniformity of planning policies, practices, and decisions are fostered.
3. Full utilization of the main planning department specialist is promoted, due in large part to their proximity to the top management level.
4. Highly qualified planning specialists can be utilized because the scope and volume of their work are sufficient to support and to challenge top-notch planners.
5. Duplication of planning functions is maintained at a minimum.
6. The danger of planning actions drifting and getting off course is minimized.
7. Elaborate and extensive controlling procedures and practices are not required.
8. Planning responsibilities are easily defined.
9. There is an aura of efficiency associated with a centralized operation.
10. A strong coordinated top-management planning team is developed.

Advantages of a decentralization planning organization.

1. A decentralized planning organization structure stresses delegation of authority and relieves the top administrators load.
2. The development of "generalists" rather than specialists is encouraged thereby facilitating succession into positions of higher management.
3. Intimate personal ties and relationships are promoted resulting in greater employee enthusiasm and coordination.

4. Plans can be tried out on an experimental basis in one area of the university, modified, and proven before being applied to the entire university.
5. There is stimulation of independent thinking, creativity and promotes the freedom to make decisions.
6. The planning process can be accelerated — less "red tape!"

After consideration of the advantages, a centralized or decentralized planning organization (office) and a critique of internal and external factors, the president should be in a position to set the stage for an appropriate planning organization (office). The president's decision as to the scope and role of planning will determine how planning is to occur in departments, branch campuses, and throughout the institution. Although, it is not the purpose of this manual to tell the president precisely how to organize his planning organization (office), the following recommendation is offered. **The president should assign a vice president (for example, academic, financial or planning) to coordinate and/or direct the planning of the university. In some institutions the president himself may want to accept this responsibility. A central planning budget should be allocated with appropriate planning personnel and support. Other key administrators, for example, other vice presidents and college deans should be assigned appropriate planning responsibility. After the foregoing responsibilities are assigned, a planning organization should be documented, communicated throughout the university and updated on a regular basis.**

One can readily see that the gist of the foregoing recommendation is that planning function in the State of Ohio should utilize the favorable features of both centralization and decentralization. In the final analysis the "best" planning organization is the one that produces workable and effective plans for a particular educational institution.

In conclusion, **it is recommended that the university presidents document that their institutions do in fact have a well organized planning operation or if not that they take vigorous action to remedy this deficiency.**

PARTICIPATION IN PLANNING

If planning is to succeed, there must be participation and a commitment to the process. In many cases, participation and commitment go hand-in-hand.

As previously stated, before meaningful planning can begin there must be enthusiasm and a commitment of the president and other top administrators.

The MIP Inventory of Current Planning Practices reveals that almost all of the state universities make use of a wide range of committees and encourage a great deal of involvement in the planning process.

Because of a number of factors, including a wide range of committees, it is almost impossible to specify who should be involved in every planning effort. Rather, each university must decide the question of involvement on an individual basis. **It is recommended, however, that the determination of involvement should be made on a systematic basis for every plan developed.**

Figure 11 might be used as a guideline in determining the question of involvement.

Figure 11

GUIDELINES IN DETERMINING THE QUESTION OF INVOLVEMENT Name of Plan _____

Major Groups affected by Plan	Is this group affected? Yes or No	If no, why not? If yes, how?	If yes, who should represent this group?	How can they participate?	What will be their responsibilities & authority?
1. Central Planning Staff					
2. Top Administrators					
3. Other Administrators					
4. Middle Manager — deans, division heads, etc.					
5. Faculty					
6. Alumni					
7. Townspeople					
8. Other citizens					
9. Board of Trustees					
10. OBR					
11. Students					
12. Non academic personnel					
OTHERS					
13.					
14.					

Figure 11 can be useful as a guideline to determine the extent of participation. However, the political power bases of individuals and organizations should also be recognized and evaluated. This subject is too complicated to be dealt with fully in this manual, nor is it appropriate. However, it should be recognized that on every campus and indeed within every organization, there is a power base. That is, there are individuals who must approve of something before it can be adopted and implemented. For example, it would be doubtful that an institution could successfully develop an academic plan without involving the faculty senate or similar body. Another example would be that an institution could not approve a new Ph.D. program without the approval of the Ohio Board of Regents.

Whatever and whoever the power bases, special efforts should be exerted to inform and involve these groups. One should be careful, however, in overlooking what might not appear to be a power base, e.g., students.

The issue of participation is the concluding issue of factors involved in organizing the planning function. It is by no means implied that the factors we have discussed in the chapter are all inclusive. However, it is believed that the issues discussed and the recommendation made will provide a focal point for the president to formally organize or improve the planning function at his institution.

4. Prerequisites for Successful Planning

Commitment

Successful planning doesn't just happen, it must be planned. As previously stated, the single most important aspect of successful planning is to have the commitment and enthusiasm of the president and the top administrators. If a commitment exists, the university president will ascertain that there is a well-defined planning process (See Chapter Two) at his institution. To complement and implement the planning process, there must also be a well-defined planning organization (See Chapter Three). In addition to the planning process and the planning organization, there are a number of other prerequisites for successful planning. Some of these are: an information data base, planning and resource allocation aids and techniques, cooperative planning with other institutions and utilizing outside experts where needed.

Information Data Base

An information data base is a collection of discrete items of information, called data elements, which describe specific systems; e.g., the data elements which describe students, faculty, etc. In this planning manual, we are specifically concerned with the data elements of the Comprehensive-Institutional Plan and its major subcomponents, the Foundation Plan, the Educational Plan, the Physical Development Plan, and the Financial Plan.

The desirable data for the data base will depend on several factors. They are: (1) What types of data are desirable or required for a certain type of plan? (See Chapter Five — The Major Components of Plans). (2) What types of data from this plan will be required by outside agencies? For example, accreditation agencies, federal agencies, state government, national organizations such as WICHE, consortia groups and other sister institutions, state auditors office, OBR, etc. (3) What types of data from this plan will be required for other plans, e.g., enrollment data is required for almost every plan.

In order to obtain a good idea of data base requirements, it might be desirable to develop a matrix similar to Figure 12.

Figure 12

MATRIX TO DETERMINE DATA BASE REQUIREMENTS

Name of Plan **Educational Plan**

Specify all the data elements you can think of	Give a weighted evaluation of its importance*	Specify the reports that presently use this data	Specify the reports that could use these data	Could the data element be eliminated from this plan
Total no. of Depts.				
Total no. of Programs by Level				
Total no. of Majors				
Total no. of Courses				
Total no. of Sections				
Total Enrollment (head count)				
FTE Enrollment				
Average Class Size by Program Level				
Total Faculty (head count)				
Total Faculty FTE				
Student/Faculty Ratio				
Faculty Load (Total credit hours taught)				
Faculty Load (Average hours taught)				
Faculty Load (Total contact hours)				
Faculty Load (Average contact hours)				
Total credit hours offered				
No. of Student Dropouts				
No. of Student transfers				
No. of degrees earned				
No. of graduates attaining jobs				
No. of graduates going on for advance degrees				
No. of graduates going in public services, e.g., Peace Corps, Vista, etc.				
No. of graduates not accounted for				
No. of graduates from out of state				
No. of graduates from out of state who stayed in Ohio				

Specify all the data elements you can think of	Give a weighted evaluation of its importance*	Specify the reports that presently use this data	Specify the reports that could use these data	Could the data element be eliminated from this plan
No. of graduates from Ohio				
No. of Ohio graduates who stayed in Ohio				
Average income generated by each student graduating by Program				
Average expenditures for each student graduating by Program				
Faculty Salaries				
Average FTE salaries				
Faculty Benefits				
Average FTE benefits				

*1 very important
2 important
3 some importance
4 Little or no importance

It is obvious that the foregoing example in Figure 12 only touch upon the possible types and extent of data that are required or desirable for the planning process. It should also be obvious that the determination of an adequate data base is a mammoth task. Because in addition to the data requirement for various types of plans, there are data requirements for such functions as: Enrollment, personnel, space, finance, admissions and registration, etc.

One word of warning in developing a data base is that too much faulty data is more of a handicap to good planning than too little data. To assist in the task of evaluating a data base, the following criteria are suggested.

1. Is there a need for the data base? How much of a need? Who uses the data? Can the need be provided for with other data?
2. Is the data base completed? Are data available to support the auditing, control and decision-making functions?
3. Is the data base flexible? Can data elements be easily added or purged from the files?
4. Is the data base accurate? Are the data in the files edited and verified on a regular basis to assure accuracy?
5. Is the data base timely? Are procedures for maintaining the data bases adequate to assure the user that data are current?
6. Is the data base accessible? Can information be easily extracted from the data bases when it is needed?

7. Is the data base compatible? Can data elements from different bases (files) be pulled together for reporting purposes. Is there an interface or linkage between all files composing the data bases?
8. What is the cost of the data base? Are the benefits of maintaining the data base in line with cost?

Because of the complexities of developing and maintaining a data base, it is absolutely essential that some systematic means be utilized for this important function. The suggested format in Figure 13 can be useful to planners — particularly on a small campus or in the early stages of developing a data base. A data base may be manually prepared, computer generated, or a combination of both methods. However, long-range requirements will generally mandate the requirement of computer services, and systems specialist. The subject of data bases will be discussed in greater detail in the MIP Computer Services Manual.

As a follow-up to the MIP Planning Manual, it is recommended that the OBR organize a special task force to work with the state institutions in the establishment, up-grading and maintenance of a comprehensive Management Information System (MIS) data base. The OBR has started the development of a Central Data Base in its Uniform Information System. However, it is questionable as to how much the data are being used at individual institutions for planning purposes. Therefore, the Uniform Information System should be examined along with other information systems, such as that developed by WICHE to determine how data could be better utilized in a Management Information System for individual institutions and the state as a whole.

Planning Tools & Techniques

Educational administrators have at their disposal a wide array of traditional tools and techniques for planning. Knowledge about planning tools and techniques is also increasing at a fast pace. Figure 13 presents a typology of tools and techniques that may be used in the planning process.

The first main category groups in Figure 13 are non-quantitative or subjective planning tools which are based on value judgment, experience and intuition. The operational descriptions of these tools lies in the realm of the behavioral science, they rely on individual or collective judgment.

The second category outlines some of the more conventional general systems methods and accounting techniques.

The third category includes methods of presenting analytical data in graphic form. The communication value of these visual tools cannot be overemphasized. A well-designed flow chart or a Critical Path Method (CPM) network can help administrators identify bottlenecks, dramatize the importance of making a decision about scheduling and identify the levels of administrative decisions involved.

The fourth category groups quantitative techniques based upon mathematical and statistical methods. Old techniques may be more appropriate for the management of smaller institutions, whose personnel may be more familiar with conventional methods of analysis. Newer mathematical techniques can be expensive and time-consuming, thus more suitable for complex, large

Figure 13

TOOLS USED IN THE PLANNING PROCESS

I. Nonquantitative
(Subjective judgment)
   A. Creative mental processes
   (hunches, creativity experience, judgment, intuition, brain storming)
   B. Finding the Critical Factor(s)
      1. Simple decision chains and tables
      2. Asking the right questions
      3. Past experiences and knowledge
   C. Organization per se (planning, organizing, and budget system)
   D. Rules of thumb
   E. Simple problem-solving steps
   F. Policies and procedures
   G. General knowledge in the field

II. General Systems Methods
   A. Problem design
   B. Nonquantitative simulation model building
      1. Logical-analytical frameworks
      2. Adaptive search
      3. Work flows
   C. Accounting Systems and Models
      1. Responsibility accounting system
      2. Balance sheet and income statement, balance of funds
      3. Cash-flow analysis
      4. Accounting and budget ratio analysis
      5. Break-even analysis
   D. Design of Information Systems
      1. Management Information Systems (MIS)
      2. Ohio Board of Regents Uniform Information System

III. Conventional Scheduling Models
   A. Timetables
   B. Manning tables
   C. Gantt (Bar) chart
   D. Milestone charts
   E. Critical Path Method (CPM)
   F. Line of balance charts

IV. Quantitative
(Mathematical-statistical)
   A. Older quantitative methods
      1. Quantitative forecasting
         a. trend extrapolation
         b. exponential smoothing
         c. correlation analysis
   B. Newer Mathematical Techniques
      1. Probability theory
      2. Computer simulation
      3. Linear programming
      4. Network analysis (Pert/time and Pert Cost)
      5. Heuristic problem solving
      6. Game theory
      7. Cost-benefit analysis
      8. Decision trees
      9. Utility profiles
      10. Statistical probabilities
   D. Complex methods combining several tools
      1. Delphi Technique
      2. Systems Analysis
      3. CAMPUS
      4. Resource Requirements Prediction Model (RRPM)
      5. Student Flow Model (SFM)
      6. PPBS

institutions. However, some planners may tend to oversell the potential of sophisticated techniques as planning tools. Simulation models or game theory should be used only when the necessary preconditions for planning exist and then with extreme caution, otherwise, they can prove expensive, time-consuming, frustrating and often useless. Therefore, there are times when limited planning which relies on the older, more easily understood methods and subjective judgment may be more beneficial.

Inter-Institutional Planning

It is recommended that the universities form a presidential task force which will deal with specific inter-institutional planning areas that will increase the efficiency and effectiveness of overall management. For example a statewide plan to share computer facilities, a plan to deal with faculty negotiations, share faculty members, etc.

Consultants

It is highly recommended that universities supplement their planning process with the use of qualified consultants. A wide source of component educational consultants are available from the Ohio Board of Regents, sister institutions, national agencies and associations, industry, state and federal government, and private consultants. It is important to note that consultants should not be hired to take over a planning function, but rather to supplement the planning process with their knowledge and expertise.

5. Plans — Products of the Planning Process

This manual is concerned chiefly with the process of planning at universities. The results of such processes include specific plans, some of which are addressed in this chapter. They are all combined under the heading — The Comprehensive Institutional Plan. General descriptions of the kinds of information contained in these plans, as well as listings of the kinds of data pertinent to the problem of developing specific ones, are also included. At least two other specific kinds of plans which directly affect schools result from planning processes. The Ohio Board of Regents Master Plan and inter-institutional cooperation plans are produced in the State of Ohio. Such plans not only result from the process; they also directly influence the Comprehensive Institutional Plan described in the following pages.

The Comprehensive Institutional Plan is outlined below.

A. **Foundation Plan**
   1. Institutional role and mission statement
   2. Institutional goals and objectives
   3. Institution-wide enrollment projection by type and level of student
   4. Faculty and staff needs projections by personnel category
   5. Management Information System
   6. Organizational Structure

B. **Educational Plan**
   1. Academic and related
      a. Departmental instruction including instructional services
      b. Research
         (1) Departmental
         (2) Sponsored
      c. Public Service (including continuing education)
      d. Library services
   2. Supporting Services
      a. Student Financial Aids
      b. Auxiliary Services
      c. Student Services
      d. General Administration

C. **Physical Development Plan**
   1. Development concepts and planning parameters
   2. Land use component

3. Building component
4. Development capital

D. **Financial Plan**

1. Operating Budget Component (Income and Expenditures)

a. Personnel	short-range
b. Expendable equipment	medium-range
c. Material and operations	long-range

2. Capital Budget Component

a. Facilities	short-range
b. Capital equipment	medium-range
	long-range

DEFINITIONS OF PLANS AND THEIR SUBCOMPONENTS

The **Comprehensive-Institutional Plan** encompasses the entire institution and has four major components: The Foundation Plan, the Educational Plan, the Physical Development Plan, and the Financial Plan.

The **Foundation Plan,** as one of the four major components of the Comprehensive-Institutional Plan, refers to those items which form the foundation or basis for the remaining three major segments of the Comprehensive-Institutional Plan. Included specifically are the Role and Mission component, Institution-wide Goals and Objectives, Enrollment Plan and the Faculty and Staff Plan. Also included, because of its fundamental role and importance in support of the total, is the Management Information System Plan and an Organizational Plan.

The **Educational Plan** contains in a detailed manner plans which encompass the following aspects of the institution: instruction, research, public service, financial aid, auxiliary services, library services, plant operation and maintenance, and general administration services. It should be related to the program classification structure. This plan is one of the four major components of the Comprehensive-Institutional Plan.

The **Physical Development Plan** is one of four major components of the Comprehensive-Institutional Plan. It consists of development concepts and planning parameters, a land use component, a building component and a development capital component.

The **Financial Plan** is one of four major components of the Comprehensive-Institutional Plan. It consists of the Operating Budget component and the Capital Budget component, which are considered from both short- and long-range aspects.

Subcomponent of Plans

FOUNDATION PLAN

The **Role and Mission Plan** is a statement in broad terms of the purposes of the institution. It describes its control, sources of support and history. Purposes usually include references to instructional, research and public service programs. The plan may indicate the role of the institution in the

state plan, as well as its relation to other educational institutions in its geographical area. (Secondary, two-year colleges, senior institutions, public and private schools). It may indicate enrollment goals expressed in terms of number of students and/or fraction of the area population.

The Institution-wide **Goals and Objectives** portion of the Foundation Plan stems immediately from the Role and Mission Plan. Usually addressed are relationships between degree levels and disciplines, research emphasis by type and discipline, and public service emphasis by discipline. It may consider support levels, income/expense targets and gross enrollment targets. It should address the quality, as well as quantity, of its major programs.

The **Faculty and Staff Projections** portion of the foundation plan sets goals and objectives for faculty and staff members on an institution-wide basis. It addresses the quality of its faculty and staff as well. It may set forth compensation levels, including salaries and all fringe benefits. It addresses the relative numbers of faculty and professional staff by rank and tenure. And it addresses work-load standards.

The **Management Information System** portion of the Foundation Plan addresses the data needed to support an ongoing, viable planning process. It sets goals and objectives for data acquisition, interrelationships and responsibility.

The **Organizational Component of the Foundation Plan** includes the identification and grouping of various activities deemed necessary for the attainment of goals and objectives; the assignment to individuals of responsibilities for the conduct of these activities; and the definition of the relative authority delegated each individual who is charged with the performance of each activity.

EDUCATIONAL PLAN

The **Instructional Program** portion indicates all degree and continuing education programs offered or planned by the institution and identified by program management level. It describes the programs in the broad categories of general studies, technical, baccalaureate, masters, doctoral, medical and graduate professional. For each program there are goals and objectives with a definite curriculum or set of requirements which fulfills and accomplishes the desired objectives. This portion of the Educational Plan also contains a plan of action for programs which are to be eliminated or phased out. It includes for each program its location and management in the institution and an indication of future implementation dates if such a program does not currently exist. The technology of instruction is also described.

Also addressed are instructional support categories such as media centers, Computer Assisted Instruction (CAI) and clinical support facilities.

The **Research Program** portion of the Educational Plan states research goals and objectives, classified by discipline and organization, and describes the research programs and activities. It relates these programs to the instructional programs when applicable. Addressed also are support levels by source.

The **Public Service Program** portion of the Educational Plan states public service goals and objectives, classified by discipline and organization, and describes the public service programs and activities. It relates these programs and activities to the instructional programs when applicable. Topics often addressed are adult and continuing education, workshops and seminars, and preparatory and developmental instruction. Specific population groups are often addressed, such as public employees, non-high school graduates, senior citizens, etc.

The **Library Services Program** portion of the Educational Plan details the goals and objectives set forth for library support of instructional, research, and public service programs. Considered are such items as level of support, quality and quantity of the collections, and the qualification of the professional library staff.

The **Financial Aids Program** of the Educational Plan determine the financial needs of students and outlines the financial aid goals and objectives. The Financial Aids Plan describes the categories of financial assistance to be provided students (scholarships, grants, work/study), the amount and source of financial support, and the total number and kinds of students to be assisted in the various categories. The Financial Aids Plan is an integral component of the Educational Plan.

The **Auxiliary Services Program** portion is an outline of auxiliary service goals and objectives and a description of such services now provided and planned. These normally include food and concessions, bookstores and residence halls.

The **Student Services** portion of the Educational Plan details the goals and objectives set for those programs which are designed to provide non-instructional services to students. Such areas as student personnel affairs, orientation, counseling and testing, student government, VA benefits, etc. are usually included.

The **General Administration Services** segment of the Educational Plan addresses those services and functions normally described as general expense and general (or central) administration. As in other segments of the Educational Plan, goals and objectives are stated which, in particular, deal with the level, scope and quality of services provided to the campus community.

FINANCIAL PLAN

The **Operating Budget Component** of the Financial Plan details how income and expenses will be acquired and utilized to support the Educational Plan. It should cover at least a three biennium period, starting with the current biennium. The first or current year is very detailed. The amount of detail decreases in the latter years of the plan.

The **Capital Budget Component** of the Financial Plan details how income and expenses will be acquired and utilized to support the Physical Development Plan. It, too, covers a three biennium period.

PHYSICAL DEVELOPMENT PLAN

The **Development Concepts and Planning Parameters Component** of the Physical Development Plan explains the underlying bases of physical plans. Development concepts considered are environmental-physical features, quality, natural versus man-made; aesthetic — campus motif and development theme; and functional-activity areas, relationships and centroid. Planning parameters include design standards such as scale, materials, styles and color; density measures like GAC and FAR; and time and distance standards.

The **Land Use Component** of the Physical Development Plan describes building locations, open spaces, circulation and parking.

The **Building Component** of the Physical Development Plan describes in detail plans pertaining to specific buildings. It addresses such plans from the standpoints of preservation/renovation, modification, demolition and new construction.

The **Development Capital Component** of the Physical Development Plan is closely related to the Capital Budget Component of the Financial Plan. Covered are the sources of funds, applications and time schedules.

TYPES OF INFORMATION PERTINENT TO THE PROBLEM OF DEVELOPING THE FOUNDATION PLAN

1. Societal goals and objectives; historical, current, and desired levels of attainment
   a. Years of schooling, by race and sex
   b. Literacy levels
   c. Per capita personal income
   d. Employment rates
   e. Cost of living indices
   f. Proportion of population segments using different services
   g. Manpower demand indices by discipline
   h. Postsecondary education attendance patterns by age, sex, race, etc.
   i. Population — census data

2. Impact of existing education programs relative to objectives, current and historical
   a. Strengths and weaknesses of particular programs and kinds of institution
      (1) Dispersion of benefits
         (a) Geographic
         (b) To socioeconomic groups and sub-populations
         (c) To cultural groups
      (2) Cost effectiveness
      (3) Duplication and overlap
   b. Impact on other programs and activities of the state and local community

3. Institutional aspirations
   a. Academic plans
   b. Priorities
4. Legal constraints and constitutional requirements
5. Relation of instructional programs to societal needs for educated and trained citizens
6. Relation of programs to secondary and elementary education
7. Student demand for programs (historical, current and projected)
   a. Applicants and matriculants
   b. Student expectations
   c. Reactions to existing programs
8. Programatic and departmental interactions
   a. Service relationships (i.e., extent to which departments draw on each other — induced course load matrix)
   b. Interdisciplinary programs and joint appointments
9. Community, state, federal government and agency interests and expectations relating to higher education
10. History and traditions of the University
11. Impact of research, public service and instruction on one another
    a. Co[illegible]
       (1) Sharing of faculty — joint appointments
       (2) Overhead
    b. Program offerings
       (1) Positive or negative effects due to joint appointments
       (2) Special research and public service "course" offerings — seminars, etc.
       (3) Joint products from mutually supportive projects
12. Faculty and staff needs and desires
    a. Need to establish and maintain leadership or expertise in field of study
       (1) Requirements for publishing research results
       (2) Requirements for publishing or exhibiting scholarly or artistic work
       (3) Requirements for developing and applying innovative programs and processes in public service programs
       (4) Requirements for classroom instruction
    b. Personal and group preferences
13. Constraints
    a. Limitations of physical facilities — need for sharing
    b. Contract specifications
14. Capacity of Institution to accommodate students
    a. Current patterns of utilization of facilities and staff
       (1) Excess or shortage of facilities
       (2) Alternative use patterns (night, weekend, reorganization of academic periods, etc.)
    b. Resources available for students
       (1) Land

(2) Facilities and equipment
(3) Faculty and staff

c. Time factors — start up lead times and slow down waiting periods
d. Scale factors
(1) Impact of size on quality of instruction
(2) Impact on student-faculty contact

15. Capacity of surrounding community to accommodate students
16. Impact of financial charges and financial aids to students
17. Faculty measures
a. Teaching effectiveness
b. Research capability
c. Salary and compensation levels
d. Workload measures

Organizational structure

A. Goverance
1. Organization charts
2. General government of the university
a. Board of Trustees
b. Chief administrative officers

B. Organization of the Academic Staff
1. Colleges, schools, division, departments, etc.
2. Executive officers of the academic staff

C. Organization of the Non-academic Staff
1. Divisions, depts, etc.
2. Executive officers of the non-academic staff

D. Consulting and deliberating bodies of the university
a. Faculty Senate
b. Other councils and committees, e.g., budget advisory committees, space utilization committees, graduate council, administrative council, etc.

TYPES OF INFORMATION PERTINENT TO THE PROBLEM OF DEVELOPING THE EDUCATIONAL PLAN

1. Description of the programs
a. General
(1) Size — enrollments and number of degrees planned
(a) Maximum feasible
(b) Minimum feasible
(2) Features not provided by other programs
(3) Start up and shut down times

b. Costs
(1) Resources required, total and from particular fundors — faculty, staff, facilities, instructional aides, etc.
(2) Cost of the resources — total and per outcome indicators
(3) Scale economics — cost differentials related to size of program

(4) Start up and shut down costs
c. Outcomes and impacts
(1) Student growth and development
(a) Knowledge and skills development
(b) Social development
(c) Personal development
(d) Career development
(2) Development of new knowledge and art forms
(a) Discovery
(b) Interpretation and application
(c) Reorganization
(3) Community development and service
(a) Community development
(b) Community service
(c) Longer term community effects
(4) Relation to state/regional goals and objectives
d. Links with other programs — service relations
e. Quality of program

2. Relation of programs to society
a. Student demand for program
(1) Current and historical enrollments and numbers of students refused admission
(2) Estimated future demands
(3) Alternative programs in which those not accepted might enroll
b. Labor market prospects — state and national
(1) Current and future supply of manpower
(a) Carryover from prior years — death and other attrition are key factors
(2) Current and future demand for manpower
(a) Existing industries and organizations
(b) New technologies
(3) Migration patterns — interstate and intrastate
(4) Job market prospects
(a) Unemployment rates
(b) Starting salaries
(5) Plans of other programs and institutions
c. General public support

3. Institutional role and mission
a. Legal requirements
b. Academic master plans and institutional aspirations and priorities

4. Alternatives — costs, advantages and disadvantages
a. Alternative programs
b. New delivery systems and technologies

5. Possible constraints
   a. Total resources available
   b. Faculty and staff commitments including tenure
   c. Short supply of needed faculty and staff
   d. Facilities and equipment, etc.
   e. Construction lead times and delays
   f. Prior projections
   g. Need to move slowly enough to maintain support of faculty and staff

6. Developmental instruction parameters
   a. Number and kind of students involved
   b. Resources required — faculty, staff, equipment, counselors, financial aids, etc.
   c. Relationship to other programs
   d. Sources of support — government, foundations, donors, etc.

7. Additional parameters especially useful to Financial Aids Program
   a. Types and kinds of financial aides
   b. Relationship to programs
   c. Sources of support
   d. Organization for handling
   e. Student employment
   f. Attendance expenses

8. Additional parameters especially useful to Auxiliary Services Program
   a. Range of auxiliaries — bookstore, food, housing, etc.
   b. Number and kind of students affected
   c. Income/expense levels
   d. Policies
   e. Relationship to instructional programs

9. Additional parameters especially useful to Library Services Program
   a. Scope of collections and services
   b. Standards
   c. Organization
   d. Relationship to instructional and research program
   e. Space

10. Additional parameters especially useful to Student Services, Plant Operation and Maintenance Services, and General Administration Services program plan
    a. Scope of services
    b. Philosophy of services
    c. Standards
    d. Expense data
    e. Relationship to instructional, research and public service programs

TYPES OF INFORMATION PERTINENT TO THE PROBLEM OF DEVELOPING THE PHYSICAL DEVELOPMENT PLAN

1. Land Inventory
   a. Topo maps
   b. Land-use maps
   c. Land ownership and value data
   d. Development density data
   e. Physical features descriptions
   f. Utility lines (route maps and capacities)
   g. Development restriction (zoning, public easements, etc.)

2. Facilities Inventory
   a. Building data
   b. Room data
   c. Street and road conditions data
   d. Parking inventory (counts by sub-area)
   e. Open space inventory (acreage by use)

3. Land Use Needs
   a. Building sites
   b. Academic program open space (e.g., research plots, cropland, outdoor assembly area)
   c. Environmental open space (e.g., natural areas, lawn areas)
   d. Recreational open space (PE, Intramural areas, athletics)
   e. Service open space (landfill, motor pool, service courts)
   f. Circulation road, streets, pedestrian/bike paths, pedestrian plazas)
   g. Parking (surface, structure, below grade)

4. Facility Needs
   a. Parking needs by sub-area
   b. Circulation needs by mileage, type, interface with urban streets, etc.
   c. Open space development projects by type, description (courts, fields, etc.)

	additions	new	replacement
1) academic			
2) student services			
3) plant services			
4) recreational			
5) residential			
6) food service			
7) utilities			

Appendix 1

GUIDELINES FOR DEVELOPING GOALS AND OBJECTIVES

STAGE I GOAL AND OBJECTIVES ANALYSIS

Many of the basic ideas for Stage I came from two books by Robert F. Mager, **Goal Analysis and Preparing,** and **Instructional Objectives.** It is important to note that the style of writing is from an individual's viewpoint. However, the proposed principles of writing goals and objectives apply equally to any organization.

STEP 1 Write down what you think or feel are goals and objectives. What is it that my organization unit wants to do or happen? Why does it exist? Write down as many statements as you can think of. Because this is a first step, use whatever words are comfortable, regardless of how fuzzy or vague they may be. At this stage, don't be concerned if each statement is a goal or objective.
Thus, the first thing in goal and objectives analysis is simply to initiate a brainstorming exercise.

STEP 2 Write down the indices of performance that would cause you to agree the goal or objective has been achieved without regard for duplication or fuzziness. Keep in mind that this is still a scratch paper exercise. There are three strategies that may help you complete this step of describing the achievement of the goal or objective.

1. Answer the question, "What will I accept as evidence my goal or objective has been achieved?"
2. Answer the question, "Given a set of 'outcomes', what is the basis on which we would separate them into two groups; those outcomes which had achieved our goals and those which had not?" Yes or no situations.
3. How would someone outside our organization know if we have attained our goals and objectives? What clues would they look for?

Again. Step 2 is for getting things down in writing—a brainstorming exercise.

STEP 3 Step 3 is a sorting out stage. Sort the things you have listed in Step 2, looking for abstract statements and duplications. Once a goal or objective has been written and a list has been drafted of the things you think would cause you to agree the goal or objective has been achieved, the list is sorted out and separated into goals and objectives. Remember, goals are long-range and objectives are short-range. Write your goals on one sheet of paper and your objectives on another. Duplications are deleted, as are the items that, on second thought, are unwanted. Abstractions are made precise and performances are indicated. Each individual goal and objective is then written on a separate piece of paper. The process is repeated until every item appears to be a goal statement, an objective statement, or neither.

STEP 4 Step 4 is refining the criteria or level of performance that would cause you to say that your objectives have been achieved and progress is being made toward attaining your goals. Write a complete statement for each goal and objective which describes the precise nature, quality, or amount of performance you will

APPENDIX 1

consider acceptable when evaluating the success of your stated goals and objectives. Identify the time frame. Make coherent statements to describe what you intend for each of the performancs on your list. For example, you must define precisely what you mean by terms used in your goal and objective statements. For example, terms such as regular, testing, understand, etc. must be precisely defined. Remember, your statements must describe the outcomes you must achieve to be willing to say your goal or objective is satisfied. This step will facilitate your testing of the indices of performances to see if they truly reflect what you mean by the goal or objective and thus assist you in communicating your thought.

STEP 5 Test each appropriate statement in order to determine if it is a goal, an objective, or neither. See Figure 1.1

A. Apply the criteria for the determination of goals to each statement that appears to be a goal. A "no" answer disqualifies the statement as a goal.

Figure 1.1

GOAL CRITERIA	STATEMENT A	STATEMENT B	OTHER
Is the expected outcome in agreement with the institution's philosophy?	YES__ NO__	YES__ NO__	YES__ NO__
Is the outcome compatible with the aims and missions of the institution?	YES__ NO__	YES__ NO__	YES__ NO__
Can objectives be established for the statement?	YES__ NO__	YES__ NO__	YES__ NO__
Does the action appear to be feasible?	YES__ NO__	YES__ NO__	YES__ NO__
Can the expected results of the action be identified?	YES__ NO__	YES__ NO__	YES__ NO__
Is the time frame long-term?	YES__ NO__	YES__ NO__	YES__ NO__

Thus each goal statement will reflect a 100% "yes" response for all the criterial questions.

B. After tentative goals have been identified, apply each statement that appears to be an objective to the objective criteria, see Figure 1.2. A "no" answer disqualifies the statement as an objective. Thus each objective statement will reflect a 100% "yes" response for all the criteria questions.

STEP 6 Rewrite a list of goals and objectives—each on a separate page. Look at your wording, qualify and explain specifically what you mean. The qualification for your goal statement will, by nature, not be as precise as your objective statements. Your goal statement will probably in many cases be qualified by a narrative response. However, the qualification for the objective statements must be precise.

For example, identify the specific method of measurement, establish the criteria, specify the time period, etc.

Figure 1.2.

OBJECTIVE CRITERIA	STATEMENT A	STATEMENT B	OTHER
Does the statement relate to a goal?	YES___ NO___	YES___ NO___	YES___ NO___
Is the end result measurable or observable?	YES___ NO___	YES___ NO___	YES___ NO___
Can a specific traget group be identified?	YES___ NO___	YES___ NO___	YES___ NO___
Can the method of measurement be specified?	YES___ NO___	YES___ NO___	YES___ NO___
Can the criteria for evaluation be identified?	YES___ NO___	YES___ NO___	YES___ NO___
Can the testing conditions be identified?	YES___ NO___	YES___ NO___	YES___ NO___
Can a short time period for achievement be specified?			

STEP 7 Test each goal and objective with the following question. If someone achieved or or demonstrated the specified indices of performances for each goal or objective, would we be willing to say that he has achieved the goal or objectives? When you can answer "yes" to each statement, this stage of goal and objective analysis is completed.

STAGE II INCUBATION AND REVIEW METHOD

STEP 1 Set aside what you have done in Stage 1 for a few days.

STEP 2 Review what you have done. Delete duplications and unwanted items, add others and finally retest each goal and objective. Redraft your list.

STEP 3 Review what you have done with your associates. **Can you communicate your goal and objective to them?** If not, revise. When this draft is completed, you are ready for Stage III.

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STAGE III THE CONTRACT STAGE

STEP 1 Sit down with your department or division head and agree in writing what your goals and objectives will be and what measure of performance will be acceptable as to whether you attain your goals and objectives. Where necessary, revise.

STEP 2 Review the progress of goals and objectives with your department or division head on a regular basis throughout the budget year.

STEP 3 Have a formal review period with your department or division head at the end of the goals and objectives time frame. Did you or did you not attain your objectives and make progress toward your goals? Explain in writing.

STEP 4 Start with Stage I for the next budget period.

When foregoing Stages (I, II, and III) are completed, a budgetary unit should have a workable list of goals and objectives that can be used for evaluation purposes in a program budgeting process.

Appendix 2

THE UNIVERSITY OF GEORGIA PROGRAM STRUCTURE

1.0 Direct Student Related Programs
- 1.1 Core
- 1.2 Undergraduate
- 1.3 Professional
- 1.4 Graduate

2.0 Environmentally Related Programs
- 2.1 Continuing Educations
- 2.2 Research
- 2.3 Service
- 2.4 Preservation of Culture

3.0 Inwardly Directed Programs
- 3.1 General Administration
- 3.2 Business Enterprises

Appendix 3

THE OHIO STATE UNIVERSITY PROGRAM STRUCTURE

1.0 Primary Academic Program

(1) 1.10 Instruction
- 1.11 Organized Teaching of Degree Credit Courses in Academic Departments
- 1.12 Advising and Counseling in Academic Departments at Various Levels
  - 1.121 Major Program Advisors
  - 1.122 Graduate Reading Committees
- 1.13 Provision of Professional Training Facilities
  - 1.131 Demonstration Schools
  - 1.132 Farms, Dairies, Creameries, Foundaries, Shops
  - 1.133 Theatre Workshops
  - 1.134 Clinics and Counseling Services
  - 1.135 Airport

(2) 1.20 Research, Creative Work and Development
- 1.21 Research and Creative Projects
- 1.22 Development
  - 1.221 Non-Project Research
  - 1.222 Professional Development
  - 1.223 Curriculum Development
- 1.23 Provision of Specialized Facilities for Research and Creative Activities
  - 1.231 Survey Research Center
  - 1.232 Research Farms
  - 1.233 Nuclear Reactors
  - 1.234 Faculty Studios

(3) 1.30 Public Service
- 1.31 Non-Degree Credit Instructional Programs
  - 1.311 Forms, Workshops, Seminars
  - 1.312 Specialized Training Programs
- 1.32 Dissemination of Knowledge Through Other Than Organized Teaching
  - 1.321 Agricultural Extension
  - 1.322 Community, T.V., and Radio
  - 1.323 Scholarly Journals and Consulting
  - 1.324 Cultural Activities and Museums
- 1.33 Regulation and Inspection Services
  - 1.331 Soils and Materials Testing
  - 1.332 Professional Licensing
  - 1.333 Dairy Heard Testing

2.0 Academic Environment Support Programs

(5) 2.10 Student Services
- 2.11 Health, Care, and Subsistence
  - 2.111 Dorm

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2.112 Food
2.113 Health
2.114 Counseling
2.12 Financial Support
2.121 Scholarships
2.122 Loans
2.123 Fee Waivers
2.124 Work Study
2.13 Extracurricular Service
2.131 Athletics
2.132 Activities
2.133 Alumni

(4) 2.20 Learning Resources
2.21 Library Services
2.22 Provision of Specialized Learning Facilities for General Use
2.221 Computing Center
2.222 Language Listening Center
2.23 Provision of Specialized Learning Services for General Use
2.231 Telecommunications
2.232 Audio-Visual Aid

3.0 General Support Programs

(6) 3.10 General Support
3.11 General Administration
3.111 Administrative Units
3.112 Promotion
3.113 General Expenses
3.12 Provision of Support Facilities
3.121 Bookstores
3.122 Laundry
3.123 Data Processing
3.124 General Stores
3.13 Maintenance and Construction of Plant
3.131 Maintenance
3.132 Construction

Appendix 4

WICHE PROGRAM STRUCTURE

The Educational Institution

I. Primary Programs
- 1.0 Instruction
  - 1.1 Regular Instruction
  - 1.2 Special Session Instruction
  - 1.3 Extension Instruction (for credit)
  - 1.4 Experimental Instruction
- 2.0 Organized Research
  - 2.1 Institutes and Research Centers
  - 2.2 Individual or Project Research
- 3.0 Public Service
  - 3.1 Departmental Continuing Education
  - 3.2 Organized Extension Continuing Education
  - 3.3 Organized Extension Community Service
  - 3.4 Campus Community Service
  - 3.5 Agriculture Extension Service

II. Support Programs
- 4.0 Academic Support
  - 4.1 Libraries
  - 4.2 Museums & Galleries
  - 4.3 Audio/Visual Services
  - 4.4 Computing Support
  - 4.5 Auxiliary Support
- 5.0 Student Service
  - 5.1 Social and Cultural Development
  - 5.2 Supplementary Educational Service
  - 5.3 Counseling and Career Guidance
  - 5.4 Financial Aid
  - 5.5 Student Support
- 6.0 Institutional Support
  - 6.1 Executive Management
  - 6.2 Financial Operations
  - 6.3 General Administrative Service
  - 6.4 Logistical Services
  - 6.5 Physical Plant Operations
  - 6.6 Faculty and Staff Services
  - 6.7 Community Relations
- 7.0 Independent Operations
  - 7.1 Institutional Operations
  - 7.2 Outside Agencies

Appendix 5

Program Classification System Developed By Robert T. Sandin, University of Toledo

It is recommended, that program planning at universities be in accordance with similar Program Classification Structure outlined in Figure 1. In the case of Departmental Instruction and Research programs where it is desirable to classify programs by discipline, the HEGIS Taxonomy of academic disciplines should be followed. (This taxonomy is already in use in the system of public higher education in Ohio.) Institutional distinctives may require modification of the structure in minor details, but the analysis and budgeting of programs should adhere to the basic outline of the Program Classification Structure.

It should be emphasized that the Program Classification Structure of Figure 2 is an outline of possible university programs and by no means suggests that each university should conduct the full range of programs. Nor is any particular scheme of administrative organization necessarily implied by the Program Classification Structure of Figure 2. The structure should be followed, however, in all reporting of expenditures by program.

Figure 1

PROGRAM CLASSIFICATION STRUCTURE

I. PRIMARY PROGRAMS
- 1.0 Departmental Instruction and Research
  - 1.1 General Studies
  - 1.2 Technical Education
  - 1.3 Baccalaureate General
  - 1.4 Baccalaureate Professional
  - 1.5 Master's
  - 1.6 Graduate Professional
  - 1.7 Doctor's
  - 1.8 Medical
- 2.0 Research
  - 2.1 Individual or Project Research
  - 2.2 Research Centers or Institutes
- 3.0 Public Service
  - 31. Continuing Education (Non-credit, non-degree)
  - 3.2 Medical or Hospital Service
  - 3.3 Agricultural Extension Service
  - 3.4 Public Broadcasting
  - 3.5 Community Service Centers

II. SUPPORT PROGRAMS
- 4.0 Instructional Support
  - 4.1 Audio/Visual Services for Instruction

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- 4.2 Academic Computing Support
- 4.3 Museums and Galleries for Instructional Support
- 4.4 Telecommunications for Instructional Support
- 4.5 Clinical Services for Instructional Support
- 4.6 Language Laboratories

5.0 Libraries

6.0 Plant Operation and Maintenance
- 6.1 Custodial Service
- 6.2 Security and Protection
- 6.3 Heating and Utilities Service
- 6.4 Building Repair and Maintenance
- 6.5 Equipment Repair and Maintenance
- 6.6 Grounds Maintenance

7.0 Student Services
- 7.1 Admissions
- 7.2 Course Registration and Student Record Keeping
- 7.3 Placement Service and Career Guidance
- 7.4 Student Counseling and Guidance

8.0 General Support Services
- 8.1 Administrative Data Processing
- 8.2 Telephone Service
- 8.3 Mail Service
- 8.4 Publications and Reproduction Service
- 8.5 Purchasing and Property Control
- 8.6 Motor Vehicle Operation
- 8.7 Space Assignment and Scheduling

9.0 General Administration
- 9.1 Executive Management
- 9.2 Financial Operations
- 9.3 Management Information System
- 9.4 Faculty and Staff Personnel Services
- 9.5 Public Information and External Relations

10.0 Auxiliary Enterprises
- 10.1 Student Housing
- 10.2 Food Service
- 10.3 Student Health Service
- 10.4 Student Activities and Recreation
- 10.5 Student Social Activity and Relations
- 10.6 Student Cultural Activity
- 10.7 Intercollegiate Athletics
- 10.8 Bookstore

11.0 Student Financial Aid

Bibliography

A PLANNING OUTLINE FOR THE STUDY AND COORDINATION OF WASHINGTON HIGHER EDUCATION. State of Washington. Council on Higher Education, 1972.

Ackoff, Russell L., **A CONCEPT OF CORPORATE PLANNING.** New York: Wiley-Interscience, 1970.

Ammerman, H. L. and W. H. Melching. **THE DERIVATION, ANALYSIS, AND CLASSIFICATION OF INSTRUCTIONAL OBJECTS,** George Washington University, 1966.

Argenti, John, **CORPORATE PLANNING A PRACTICAL GUIDE,** Homewood, Illinois: Dow Jones, Irwin, Inc. 1969.

Bareither, Harlan D. and Jerry L. Schillinger, **UNIVERSITY SPACE PLANNING: TRANSLATING THE EDUCATIONAL PROGRAM OF A UNIVERSITY INTO PHYSICAL SPACE REQUIREMENTS,** Urbana, University of Illinois Press, 1968.

Best, Clebern E. and William S. Thomas, "Let's Improve Planning Communications **MANAGERIAL PLANNING,** Sept.-Oct. 1970. pp. 29-33+.

Bloom, Benjamin S., ed. **TAXONOMY OF EDUCATIONAL OBJECTS: THE CLASSIFICATION OF EDUCATIONAL GOALS, HANDBOOK I:** The **COGNITIVE DOMAIN,** New York, David McKay Company, Inc. 1956.

Branch, Melville, "Comprehensive Planning: A New Field of Stddy," **AIP JOURNAL,** Vol. 45 (1960), pp. 115-120.

Branch, Melville C. **THE CORPORATE PLANNING PROCESS.** The American Management Association, 1962.

Branch, Melville C. **PLANNING ASPECTS AND APPLICATIONS,** New York. John Wiley & Sons, 1966.

Butler, J. H. "College Planning", **COLLEGE & UNIVERSITY BUSINESS,** Vol. 28, January, 1960.

Caffrey, John, **THE FUTURE ACADEMIC COMMUNITY.** Washington: American Council on Education, 1969.

Casasco, Juan A. **"PLANNING TECHNIQUES FOR UNIVERSITY MANAGEMENT,** Washington: American Council on Education with the ERIC Clearinghouse on Higher Education, 1970.

Cassaco, Juan A. **CORPORATE PLANNING MODELS FOR UNIVERSITY MANAGEMENT,** Report 4, Washington: ERIC Clearinghouse on Higher Education, 1970.

Castaldi, Basil, **CREATIVE PLANNING OF EDUCATIONAL FACILITIES.** Chicago: Rand McNally & Company, 1968.

COST ESTIMATION MODEL, The Implementation of long-range planning models at the University of New Mexico. Office of Institutional Research Data Processing Center, University of New Mexico. April 1972.

DeBoer, John C. **LET'S PLAN A GUIDE TO THE PLANNING PROCESS FOR VOLUNTARY ORGANIZATIONS,** Boston: Pilgrim Press, 1970.

Denning, Dasil, W. (ed), **CORPORATE PLANNING SELECTED CONCEPTS,** London: McGraw-Hill, 1971.

Dober, Richard R. **CAMPUS PLANNING,** Reinhold Publishing Corp., New York, 1963.

BIBLIOGRAPHY

Elicker, Paul H. "The Challenge to Planners," **MANAGERIAL PLANNING,** September-October, 1972, pp. 1-9+.

Ewing, David W., **THE PRACTICE OF PLANNING,** New York: Harper & Row Publishers, 1968.
Ewing, David W. (Ed.), **LONG-RANGE PLANNING FOR MANAGEMENT,** 3rd ed. New York: Harper & Row, Publishers, 1972.

Fulmer, Robert M. "Forecasting The Future" **MANAGERIAL PLANNING,** July-August, 1972, pp. 1-5.

Goodman, Sam R. (Ed.), **TAKING THE GUESSWORK OUT OF LONG-RANGE PLANNING.** Prentice-Hall's, Inc.: Englewood Clifts, N. J., (1971).

Grein, Edward J., **WORKBOOK FOR CORPORATE PLANNING.** American Management Association, (1970).

Gunness, Robert C. "The Payoff From Planning." **MANAGERIAL PLANNING,** Sept.-Oct. 1971, pp. 2-4+.

GUIDE FOR PLANNING EDUCATIONAL FACILITIES, Council of Educational Facility Planners, Columbus, 1969.

GUIDELINES FOR SITE, SECTION LONG-RANGE FACILITIES PROGRAM PLANNING. Colorado Commission on Higher Education: Denver, Colorado, July 1970.

GUIDELINES FOR PLANNING IN COLLEGES & UNIVERSITIES, VOLUME 1 of 5, **PLANNING SYSTEM.** The Coordination Board & Texas College & University System, 1968.
Volume 2 of 5 **MANAGEMENT & FINANCIAL PLANNING.**
Volume 3 of 5 **PHYSICAL PLANT PLANNING, LAND USE AND TRAFFIC.**
Volume 4 of 5 **PHYSICAL PLANT PLANNING, FACILITIES STUDIES.**
Volume 5 of 5 **PHYSICAL PLANT PLANNING, UTILITIES STUDIES.**

Hanigan, John L. "The Payoff From Planning," **MANAGERIAL PLANNING,** Sept.-Oct. 1971, pp. 5-6+.

Haldi, John. "Criteria for Definition of Program Categories and Program Elements," speech at U. S. Naval Post Graduate School, Monterey, California, November 9, 1965. Washington: United States Bureau of the Budget, 1965, p. 2.

Hartley, Harry J. **EDUCATIONAL PLANNING-PROGRAMMING-BUDGETING: A SYSTEMS APPROACH,** Englewood Cliffs, N. J.: Prentice Hall, Inc., 1968, 290 pp.

HIGHER EDUCATION MODEL BUDGET ANALYSIS SYSTEM, as used in the State of Washington: Olympia, Washington, February, 1971.

Hitch, Charles J. "Program Budgeting in a University Setting" Speech given to American Society for Public Administrators. Sacramento California. December, 1967.

Hitch, Charles J. "What are the Programs in Planning, Programming, Budgeting" Speech delivered to the symposium on "Operations Analysis of Education," U. S. Department of Health, Education and Welfare, Office of Education, Division of Operations Analysis, Washington, D. C., November 21, 1967.

Hovey, Harold A. **THE PLANNING-PROGRAMMING-BUDGETING APPROACH TO GOVERNMENT DECISION-MAKING.** Praeger, 1968.

Jungherr, J. AL "Can Small Schools Use a Planning-Programming-Budgeting System" Paper presented at the New York State School Business Officials Meeting, May, 21, 1968.

Krathwohl, David R., Benjamin S. Bloom, and Bertram B. Masia. **TAXONOMY OF EDUCATIONAL OBJECTIVES, HANDBOOK II: AFFECTIVE DOMAIN.** New York: McKay, 1964.

Lowe, Frank A. "How to Initiate a Performance Budget," **PERFORMANCE BUDGETING AND UNIT COST ACCOUNTING FOR GOVERNMENT UNITS.** Chicago: Municipal Finance Officers Association, 1954.

Lyden, Fremont J. **PLANNING, PROGRAMMING, BUDGETING: A SYSTEM APPROACH TO MANAGEMENT.** Markham Publishing Co., 1967.

Mager, Robert F. **MEASURING INSTRUCTIONAL INTENT.** Belmont, California, Fearon Publishers, 1973.

Mager, Robert F. **PREPARING INSTRUCTIONAL OBJECTIVES.** Palo Alto, California, Fearon Publishers, 1962.

Mager, Robert F. **GOAL ANALYSIS.** Belmont, California, Fearon Publishers, 1972.

Majjar, Adman, "The Nature of Planning & Plans," **MANAGERIAL PLANNING,** May-June, 1972, pp. 5-7+.

Millett, John D., **PLANNING, PROGRAMMING, BUDGETING FOR OHIO'S PUBLIC INSTITUTIONS OF HIGHER EDUCATION,** Columbus, Ohio, Board of Regents, 1970.

Millet, John D. **THE PROCESS & ORGANIZATION OF GOVERNMENT PLANNING.** Da Capo Press, New York, 1972.

NCHEMS at WICHE, **HIGHER EDUCATION PLANNING AND MANAGEMENT SYSTEMS.** A Brief Explanation. January, 1972.

NCHEMS, **IMPLEMENTATION OF NCHEMS PLANNING AND MANAGEMENT TOOLS OF CALIFORNIA STATE UNIVERSITY.** Fullerton, California. August, 1972.

Norfleet, Morris L., **PLANNING FOR CHANGE.** American Association of State Colleges and Universities. N. D.

Obata, Gyo, et al, **COMPREHENSIVE CAMPUS PLANNING,** Building Research Institute, Washington, D. C. 1962.

"Planning," **MANAGEMENT STUDY & ANALYSIS OHIO PUBLIC HIGHER EDUCATION.** Chicago: Warren King & Associates, Inc., (1969), pp. 29-37.

Riesman, David, "Planning in Higher Education: Some notes on Patterns & Problems." **HUMAN ORGANIZATION,** 18 (Spring 1959), pp. 12-17.

Sandin, Robert T., **OUTLINE OF A SYSTEM OF ACADEMIC & FISCAL PLANNING FOR THE UNIVERSITY OF TOLEDO.** The University of Toledo, 1970.

Sherwood, Malcolm, H. "The Definition of Planning," **MANAGERIAL PLANNING,** March-April, 1971, pp. 16-18.

Shoemaker, William A., **SYSTEMS MODELS AND PROGRAMS FOR HIGHER EDUCATION.** The Academy for Educational Development, Washington, D. C., 1973.

Sumner, James A., "The Payoff From Planning," **MANAGERIAL PLANNING,** Sept.-Oct. 1971 pp. 7-9+.

Steiner, George A., "Tomorrow's Corporate Planning & Planners," **MANAGERIAL PLANNING.** March, April, 1972, pp. 1-7. Excell.

Steiner, George A. and W. Cannon, eds. **MULTINATIONAL CORPORATE PLANNING.** New York: The MacMillan Company, 1966.

Steiner, George A., **TOP MANAGEMENT PLANNING,** New York: The Free Press, 1969. Major Problems Planning—Many Charts, Bibliography.

Szecsy, Richard E., "An Approach to Planning," **MANAGERIAL PLANNING,** Nov.-Dec. 1971, pp. 12-13.

Tincher, William P., "Planning For The Problems of Adversity." **MANAGERIAL PLANNING,** Nov.-Dec. 1972, pp. 1-35+.

Wells, John D., **A CONCEPTUAL FRAMEWORK FOR STATEWIDE HIGHER EDUCATION RESOURCE PLANNING, PROGRAMMING AND BUDGETING.** Wells Research Co., Inc.: Arlington, Va. September, 1972.

Wing, Paul, **REVISED TABLES OF RELEVANT INFORMATION—STATEWIDE PLANNING FOR POST-SECONDARY EDUCATION.** Conceptualization and Analysis of Relevant Information. NCHEMS: WICHE, July, 1972.

WRITING PERFORMANCE GOALS: STRATEGY & PHOTOTYPES. Gregg/McGraw Hill & The Center for Vocational and Technical Education at the Ohio State University, M. D.: New York.

Glossary

Aims — Descriptive statements of what is to be achieved in programs. They are generally broad statements and not always quantifiable.

Alternatives — Presenting a choice of plans.

Auxiliary Services Plan — An outline of auxiliary service goals and objectives and a description of auxiliary services now provided and planned.

Auxiliary Services Program — An outline of auxiliary service goals and objectives and a description of such services now provided and planned. These normally include food and concessions, bookstores, and residence halls.

Building Component — The Physical Development Plan describes in detail plans pertaining to specific buildings. It addresses such plans from the standpoints of preservation/renovation, modification, demolition and new construction.

Campus Master Plan for Physical Development — A document that outlines the land and educational facilities necessary for the educational program. One part of the Campus Master Plan is devoted to overall planning considerations, such as goals and objectives, land use, location of buildings, circulation patterns of vehicular traffic, etc. A second part of the document is subdivided by a plan for:

(a) New Land and Buildings
(b) Land-Building Modifications and Renovations
(c) Major Equipment

All the physical needs for the Campus Master Plan are ranked in order of priority with an appropriate timetable. These priorities and timetables often change because of funding limitations.

Capital Appropriations and Expenditures Budget — A plan describing how income and expenses will be acquired and utilized for the Campus Master Plan. This Capital Budget is generally based on a long-term Campus Master Plan and is a plan to use Capital funds for top priority projects. The Capital Appropriations and Expenditures Budget is generally prepared for a two-year period and a six-year period. Funding from the state is generally known for the two-year capital budget, but not for the six-year plan. The Current Operating Budget and the Capital Appropriations and Expenditures Budget should be jointly considered for approval because of their affect on each other.

Capital Budget Component — Of the Financial Plan details how income and expenses will be acquired and utilized to support the Physical Development Plan. It, too, covers a three biennium period.

Capital Plan — One of three major components of the Institutional Plan. The Capital Plan is a documentation of existing and planned new land and educational facilities, renovations and major equipment. The Capital Plan is based upon the Educational Plan.

GLOSSARY

Comprehensive—Institutional Plan

Encompasses the entire institution and has four major components: the Foundation Plan, the Educational Plan, the Physical Development Plan and the Financial Plan.

Controlling

Evaluating performance and output from the point of view of their intent and directing activities to maximize achievement of goals and objectives.

Current Operating Budget

A plan explaining how current income and expenses will be acquired and utilized to support the Educational Plan. The Current Operating Budget is generally for a one or two-year period and is detailed in nature. The Current Operating Budget and the Capital Appropriations and Expenditures Budget should be jointly considered for approval because of their affect on each other.

Data Base

A collection of discreet items of information called data elements, which describe specific systems components e.g., the data elements which describe students, faculty, the planning process, the budget, etc. Data bases have certain characteristics which must be continuously evaluated to determine their quality; e.g.,

(1) Completeness—Is data available to support the auditing, control and decision-making functions?

(2) Flexibility—Can data elements be easily added or purged from the files?

(3) Accuracy—Is the data in the files edited and verified on a regular basis to assure accuracy?

(4) **Timeliness**—Are procedures for maintaining the data bases adequate to assure the user that data is current?

(5) **Accessibility**—Can information be easily extracted from the data bases when it is needed?

(6) **Compatibility**—Can data elements from different bases (files) be pulled together for reporting purposes? Is there an interface or linkage between all files composing the data bases?

A data base may be manually prepared, computer generated or combination of both methods.

Development Capital Component

Of the Physical Development Plan—is closely related to the Capital Budget Component of the Financial Plan. Covered are the sources of funds, applications and time schedules.

Development Concepts and Planning Parameters Components

Of the Physical Development Plan—explains the underlying bases of physical plans. Development concepts considered are environmental-physical features, quality, natural versus man-made, aesthetic—campus motif and development thence; and functional-activity areas, relationships and centroid. Planning parameters include design standards such as scale, materials, styles and color; destiny measures such as GAC and FAR; and time and distance standards.

Educational Plan

Contains in a detailed manner plans which encompass the following aspects of the institution: institution, research, public service, financial aid, auxiliary services, library services, plant operation and maintenance, and general administration services. It should be related to the program classification structure. This plan is one of the four major components of the Comprehensive-Institutional Plan.

Educational Support Plan

Describes the administrative and academic services needed to sustain the instructional, research, and public service plans. It sets forth goals and objectives for these services, their location in the organization of the institution, and their relationship to the instructional, research and public service program areas. Examples of such services are data processing, admission, student registration, plant operations, general administration, libraries, counseling centers, student services, etc.

Enrollment Plan — A projection of societal needs by degree programs coupled with definite students enrollment objectives. It is completed for each year and multi-years, by level of student and program level. Generally, enrollments are also projected for each course. The Enrollment Plan usually includes demographic data relative to the enrollees. The Enrollment Plan is an integral component of the Educational Plan.

Evaluation — A systematic process for determining or estimating the effectiveness of a particular program or program component. Evaluation of programs is based on a comparison of actual results with planned results or objectives.

Faculty and Staff Plan — Describes the numbers and types of personnel needed to fulfill the Educational Plan in its entirety. It usually addresses workload standards, compensation and staff benefits. It is the major resource component of a institution of higher education.

Faculty and Staff Projections — Portion of the foundation plan—sets goals and objectives for faculty and staff members on an institution-wide basis. It addresses the quality of its faculty and staff as well. It may set forth compensation levels, including salaries and all fringe benefits. It addresses the relative numbers of faculty and professional staff by rank and tenure. And it addresses workload standards.

Financial Aids Plan — A document which sets forth the financial needs of students and outlines the financial aid goals and objectives. The Financial Aids Plan describes the categories of financial assistance to be provided students, the amount of financial support, and the total number of students to be assisted in the various categories. The Financial Aids Plan is an integral component of the Educational Plan.

Financial Aids Program — Of the Educational Plan—sets forth the financial needs of students and outlines the financial aid goals and objectives. The Financial Aids Plan describes the categories of financial assistance to be provided students (scholarships, grants, work/study), the amount and source of financial support, and the total number and kinds of students to be assisted in the various categories. The Financial Aid Plan is an integral component of the Educational Plan.

Financial Plan — One of four major components of the Comprehensive-Institutional Plan. It consists of the Operating Budget component and the Capital Budget component, which are considered from both short and long-range aspects.

Foundation Plan — One of the four major components of the Comprehensive-Institutional Plan, refers to those items that form the foundation or basis for the remaining three major segments of the Comprehensive-Institutional Plan. Included specifically are the Role and Mission component, Institution-wide Goals and Objectives. Enrollment Plan and the Faculty and Staff Plan. Also included, because of its fundamental role and importance in support of the total, is the Management Information System Plan.

General Administration Services — Segment of the Educational Plan—addresses those services and functions normally described as general expense and general (or central) administration. As in other segments of the Educational Plan, goals and objectives are stated which, in particular, deal with the level, scope and quality of services provided to the campus community.

Goals — The desired end results set for a program. Goals are generally set for long periods of time (e.g., ten years). Goals and objectivs are often used interchangeably; however, they differ in terms of time frame, measurability and sequence. Goals are long-run and the end result; objectives are short-range and are steps in the direction of attaining a goal.

Implementation Planning — A deliberate effort to put the plan into operation.

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Institution-wide Goals and Objectives — Portion of the Foundation Plan stems immediately from the Role and Mission Plan. Usually addressed are relationships between degree levels and disciplines, research emphasis by type and discipline, and public service emphasis by discipline. It may consider support levels, income expense targets and gross enrollment targets. It should address the quality, as well as quantity, of its major programs.

Institutional Plan — A comprehensive document which outlines the Educational Plan, the Capital Plan, and the Financial Plan for the institution.

Instructional Plan — Indicates all degree programs offered or planned by the institution and identified by program management level. For every degree program, there are stated goals and objectives with a definite curriculum or sequence of courses which fullfill the established requirements and accomplished the objectives of the degree program. The Instructional Plan also has a plan of action for programs which are to be eliminated or phased out. It includes for each degree program, its location and management in the institution and an indication of future implementation dates if not now an existing program. The technology of instruction is also an important component of the Instructional Plan. The Instructional Plan is an integral component of the Educational Plan.

Instructional Program — Portion of the Education Plan—indicates all degree and continuing education programs offered or planned by the institution and identified by program management level. It describes the programs in the broad categories of general studies, technical, baccalaureate, masters, doctoral, medical and graduate professional. For each program there are goals and objectives with a definite curriculum or set of rrequirements which fullfill and accomplish the desired objectives. This portion of the Educational Plan also contains a plan of action for programs that are to be eliminated or phased out. It includes for each program its location and management in the institution and an indication of future implementation dates if not now an existing program. The technology of instruction is also described. Also addressed are instructional support categories such as media centers, CAI, and clinical support facilities.

Intermediate-range — A number of designated years between a short-range and a long-range plan, e.g., 3 to 6 years.

Land Use Component — Of the Physical Development Plan—describes building locations, open spaces, circulation and parking.

Library Services Program — Portion of the Educational Plan—details the goals and objectives set forth for library support of instructional research, and public service programs. Considered are items such as level of support, quality and quantity of the collections, and the qualification of the professional library staff.

Long-range — Three to ten years or longer.

Long-range Financial Plan — A general plan of how income and expenses will be acquired and utilized to support both the Educational Plan and the Campus Master Plan. It is usually projected for a period of 3-10 years and is described in less specific terms than the Current Operating Budget. Generally, more detail is provided for the first few years of the Long-range Financial Plan; e.g., 2 biennium years, than the latter years, e.g., 3 biennium years. Thus the amount of detail generally declines as the period of the plan increases.

Management — The art and science of working with and through people to achieve organizational goals and objectives.

Management Information System — Portion of the Foundation Plan—addresses the data needed to support an ongoing viable planning process. It sets goals and objectives for data acquisition, interrelationships and responsibility.

Mission — The tasks or functions to be performed by an educational institution. For what purposes do the institutions exist in the areas of instruction, research, public service, etc.?

Objectives — The measurable attainments or desired results set for programs over a short period of time (e.g., one year). Objectives are generally thought of as progressive steps toward a goal. Thus, a series of objectives should lead to one's goal.

Operating Budget Component — Of the Financial Plan—details how income and expenses will be acquired and utilized to support the Educational Plan. It should cover at least one three-biennium period, starting with the current biennium. The first or current year is very detailed. The amount of detail decreases in the latter years of the plan.

Organizational Plan — The identification and grouping of various activities deemed necessary for the attainment of goals and objectives, the assignment to individuals of responsibilities for the conduct of these activities, and the definition of the relative authority delegated each individual who is charged with the performance of each activity.

Outputs — Something produced—The products and by-products of a process or a system.

Planning — A management process which attempts to predetermine a course of action. The planning process is characterized by a systematic consideration of goals and objectives, identification of programs, calculation and allocation of resources, priorities and alternatives, and evaluation. Planning is cyclical and continuous process.

Planning for Control — Evaluating performance and output from the point of view of their intent, and with directing activities in order to maximize achievements of goals and objectives.

Plans — A course of action. A statement of the systematic program to be followed in order to reach goals and objectives. A plan displays the inter-relationship between goals and the availability of resources to meet those goals. Plans are visible results of the planning process and generally expressed in a document. Plans are referred to as short-range, intermediate, or long-range.

Physical Development Plan — One of four major components of the Comprehensive-Institutional Plan. It consists of Development concepts and planning parameters, a land use component, a building component and a development capital component.

Policy — A premise or statement, generally broad in nature, used to guide and determine present and future administrative decisions.

Priorities — Establishing the relative importance of specific activities related to the achievement of goals and objectives.

Procedures — A particular way of doing things. A series of steps followed in a regular definite order.

Programs — A group of related activities organized to contribute to the accomplishment of specific goals and objectives. Programs set forth the output to be realized and the resources to be consumed over a given period of time.

Program Classification Structure — (PCS)—a means of identifying and organizing the activities of higher education. The WICHE Program Classification Structure, at the highest level of aggregation, organizes activities

into seven (7) programs: Instruction, Organized Research, Public Service, Academic Support, Student Service, Institutional Support and Independent Operations.

Program Management — The supervision and coordination of programs.

Program Manager — The person responsible for planning and designing of a specific program and the coordination of the program plans.

Public Service Plan — States the public service goals and objectives, classifies public service by discipline and organization and describes the public service programs or activities. It describes the relation of the public service programs or activities to goals and objectives to instruction, where possible.

Public Service Program — Portion of the Educational Plan—states public service goals and objectives, classified by discipline and organization, and describes the public service programs and activities. It relates these programs and activities to the instructional programs when applicable. Topics often addressed are adult and continuing education, workshops and seminars, and preparatory and developmental instruction. Specific population groups are often addressed, such as public employees, non-high school graduates, senior citizens, etc.

Purposes — Analogous to mission. For what reason does the educational institutions exist? What does it propose to do? Why does it exist?

Research Plan — States the research goals and objectives, classifies research by discipline and organization, and describes the research projects or activities. It describes the relation of research projects or activities to goals and objectives. It also describes the relations of the Research Plan to the Instructional Plan.

Research Program — Portion of the Educational Plan—states research goals and objectives, classified by discipline and organization, and describes the research programs and activities. It relates these programs to the instructional programs when applicable. Addressed also are support levels by source.

Resources — Personnel, space, operating support services and equipment which are converted to dollars and cents.

Role — Analogous to mission and purpose.

Role and Mission Plan — Is a statement in broad terms of the purposes of the institution. It describes its control, sources of support, and history. Purposes usually include references to instructional, research and public service programs. The plan may indicate the role of the institution in the state plan, as well as its relation to other educational institutions in its geographical area. (Secondary, two-year colleges, senior institutions, public and private schools.) It may indicate enrollment goals expressed in terms of number of students and/or fraction of the area population.

Short-range — One or two years.

Standards — Something established by authority, custom, or general consent as a model or example. Generally, there are two kinds of standards—one is concerned with what is desired, the other suggests limit.

Student Services — Portion of the Educational Plan—details the goals and objectives set for those programs which are designed to provide noninstructional services to students. Such areas as student personnel affairs, orientation, counseling and testing, student government, VA benefits, etc., are usually included.

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